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Editor's Statement

This past autumn marks the tenth anniversary of the death of Ronald P. McArthur, the founding president of Thomas Aquinas College and the original editor of *The Aquinas Review*, and this issue of the review completes the thirtieth of its own existence. We hope that this review has continued to fulfill the end for which Dr. McArthur established it in 1994, namely, to

 speak to those off the campus who share the same concerns as the teachers, alumni, and students who have, over the years, participated in the life of the college community. . . [and to] stimulate a continuing conversation with an every widening audience about some of the important topics which should concern us as men and as Christians, topics which we ignore at a risk which is much too dangerous for the health of our souls.¹

In recognition of these thirty years, at the back of this issue is included an index to the articles published in previous issues, organized by topic and by author.²

The seven essays in the present issue span several subjects, though they center around theology and philosophy. First, while emphasizing the finitude of Christ's human knowledge in contrast to his divine omniscience, Urban Hannon challenges a tendency among contemporary theologians to minimize the scope and depth of that human knowledge. Second, John McCarthy spells out the principles underlying St. John Henry Newman's idea of the nature and aim of a university and how only a Catholic university can offer the perfection of this idea. Third, Fr. Edmund Waldstein reflects on the little recognized distinction

¹ Ronald P. McArthur, "Editor's Statement," *The Aquinas Review* 1 (1994), iii.

² Note that all previous issues are available in digital form free of charge at www.thomasaquinas.edu.

between two kinds of universals contemplated by Aristotle and St. Thomas Aquinas, and how it helps to untie several conceptual knots. Fourth, Marie George defends the traditional understanding of the difference between plants and animals, arguing that, despite hyperbolic claims made by some biologists, observations do not suggest that plants can sense the world around them. Then Andrew Seeley reflects on Lady Philosophy's diagnosis of the root of Boethius's misfortune in *The Consolation of Philosophy*—not his imprisonment but his deep forgetfulness of what it is to be human. Sixth, Fr. Hugh Barbour presents the implicit complementarity between two approaches to immaterial substance, that of Plato and that of Aristotle, that are employed by St. Thomas. And finally, David Sherwood explains the inadequacy of the literalist and the allegorist approaches to Sacred Scripture, when isolated from each other, but their perfection when brought together in proper order in the hands of the Angelic Doctor.

Christopher A. Decaen
Thomas Aquinas College
November 2023

Preface

At Thomas Aquinas College we often say that the education we provide is only a beginning. For the most part, our students are reading the important works in our program for the first time, and the class discussion, while certainly helping them to better understand the principal arguments and themes in the readings and to acquire the intellectual virtues, only introduces them to the profoundest truths and deepest questions that have engaged mankind for centuries.

Accordingly, it is fitting that the College publish *The Aquinas Review* to honor its patron and to provide a forum for deeper consideration of those matters which constitute its curriculum and are central to genuine Catholic liberal education. Consistent with the nature of the College itself, this review is marked by fidelity to the *Magisterium* of the Catholic Church and a respect for the great tradition of liberal learning which is our common heritage.

The essays in *The Aquinas Review* reflect positions taken by their authors and not necessarily by the College itself. The editor—in collaboration with the editorial board—determines the contents of each issue. Any interested person may submit an essay for consideration or letters or comments on articles already published.

It is our hope that *The Aquinas Review* will be a source of wisdom to its readers and contributors.

Paul O'Reilly
President, Thomas Aquinas College

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**“LORD, YOU KNOW ALL THINGS”:
ST. THOMAS AQUINAS ON CHRIST’S
PERFECT HUMAN KNOWLEDGE AND ITS LIMITS**

Urban Hannon

“Lord, you know all things.” (Jn 21:17)
—St. Peter

“The soul of Christ . . . knows all things . . .
that, in any way whatsoever, are or were or
will be, either done or said or thought, by
anyone or anything at any time.”¹
—St. Thomas Aquinas

Modern theology suffers from Docetiphobia: not just a fear of Docetism—which, like every error, ought to be feared and so avoided for the sake of the truth—but rather an irrational and excessive fear of Docetism. So paranoid have modern

Urban Hannon is a seminarian for the Priestly Fraternity of Saint Peter. He received a licentiate in dogmatic theology from the Angelicum, having also studied at the Dominican House of Studies, the Toronto Oratory, St. Michael’s Abbey in California, the New York University School of Law, and Columbia University; he will soon be pursuing his doctorate at the University of Fribourg. Hannon’s work has appeared in *New Blackfriars*, *Medieval Mystical Theology*, *First Things*, and *The Lamp*, and he is the translator of St. Thomas’s *Quodlibetal Questions* and *Divine Names* commentary, both forthcoming with the Aquinas Institute.

¹ “Quae quocumque modo sunt vel erunt vel fuerunt, vel facta vel dicta vel cogitata a quocumque, secundum quodcumque tempus . . . anima Christi . . . cognoscit omnia.” *Summa Theologiae* III, q. 10, a. 2, resp. Here and throughout, all translations from St. Thomas are my own.

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theologians become that Christ might turn out not to have been truly human, that they have imposed all sorts of new imperfections upon him, contrary to the Christological tradition, simply to confirm that his humanity is authentic.

Nowhere has this trend been more evident than in the area of Christ's knowledge. Consider, for example, that highest knowledge that the tradition claims for his human mind: the beatific knowledge by which he beholds his own divine essence. Fearing that such knowledge would make Christ too unlike us ordinary men, modern Christologists have added new imperfections to limit the beatific knowledge of Christ, even to the point of denying it altogether. Such arguments are made not only by Protestant theologians² and Biblicists,³ and among Catholics not only by Nouvelle Theologians⁴ and historical-critical

² Friedrich Schleiermacher replaces the traditional beatific knowledge of Christ with mere "God-consciousness." Friedrich Schleiermacher, *Christian Faith: A New Translation and Critical Edition*, trans. Terrence N. Tice, Catherine L. Kelsey, and Edwina G. Lawler (Louisville, KY: Westminster John Knox Press, 2016), 596. Liberal Protestant theologians have followed Schleiermacher in mitigating the beatific knowledge and its accompanying "high Christology" ever since.

³ N. T. Wright ascribes to Jesus only an uncertain and historically conditioned set of beliefs about his own identity, which Wright refers to as "his faith-awareness of vocation." N. T. Wright, *Jesus and the Victory of God* (Minneapolis: Fortress Press, 1992), 651.

⁴ Karl Rahner remarks that the traditional claims for Christ's beatific and infused knowledge "sound almost mythological today . . . ; they seem to be contrary to the real humanity and historical nature of our Lord." Karl Rahner, "Dogmatic Reflections on the Knowledge and Self-Consciousness of Christ," in *Theological Investigations*, vol. 5: Later Writings (London: Darton, Longman & Todd, 1966), 194–95. Such perfections, he complains, would degrade "the doctrine of the true, genuine human nature of the Son as essentially similar to our own . . . into a myth of a God disguised in human appearance." *Ibid.*, 213. Hans Urs von Balthasar says that dogmatists who argue for Christ's vision of God are "no longer . . . able to make Christ's human psyche credible." Hans Urs von Balthasar, *The Glory of the Lord: A Theological Aesthetics, Vol. 1: Seeing the Form*, eds. Joseph Fessio and John Kenneth Riches, trans. Erasmo Leiva-Merikakis (San Francisco: Ignatius Press, 1983), 328 at n.141. In regard

Biblicists,⁵ but even by otherwise committed Thomists. Jean-Pierre Torrell asserts that, when it comes to St. Thomas's teaching on Christ's human knowledge, what is needed are not simply "timid refurbishments" but rather "a total reconstruction."⁶ Torrell objects especially to the beatific knowledge of the earthly Christ.⁷ Paul Gondreau, a student of Torrell, claims that "one must acknowledge the deficiencies in Thomas's Christological psychology."⁸ Gondreau says,

Even if coherent, the doctrine of Christ as *simul viator et comprehensor* [simultaneously a wayfarer and a comprehensor (of the beatific vision)] remains highly problematic, not least of which [sic] because it is difficult to reconcile with the image of Jesus presented by the Evangelists. . . . One must seek a possible alternative

to the Passion, Balthasar objects that the beatific knowledge "would be like an anesthetic preventing [Christ] from experiencing human suffering to the limit." Hans Urs von Balthasar, *Theo-Drama: Theological Dramatic Theory, Vol. 5: The Last Act*, trans. Graham Harrison (San Francisco: Ignatius Press, 1988), 259. As a part of his kenotic Trinitarian theology, Balthasar goes so far as to limit not just Christ's knowledge as man, but even his knowledge as God, in what he calls "the Son's 'economic' not-knowing: His divine knowledge is 'laid up' with the Father out of obedience." Ibid.

5 Raymond Brown, after sowing doubt about the traditional view, says, "If in the gospel reports [Christ's] knowledge seems to have been limited, such limitation would simply show to what depths divine condescension went in the incarnation—it would show just how human was the humanity of Jesus." Raymond E. Brown, *Jesus: God and Man: Modern Biblical Reflections* (New York: MacMillan, 1967), 100.

6 "timides replâtrages"; "une reconstruction totale." Jean-Pierre Torrell, "S. Thomas d'Aquin et la science du Christ: Une Relecture des questions 9–12 de la 'Tertia pars' de la Somme de Théologie," in *Saint Thomas au XXe siècle: Actes du colloque du centenaire de la "Revue Thomiste,"* ed. Serge-Thomas Bonino (Paris: St Paul, 1994), 394 (translation mine).

7 Ibid., 400–402.

8 Paul Gondreau, *The Passions of Christ's Soul in the Theology of St. Thomas Aquinas* (Munich: Aschendorff Verlag, 2002), 425.

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view, . . . surrendering the theory of Christ's beatific knowledge.⁹

In a similar vein, Thomas Weinandy writes,

The Christian theological tradition teaches that Jesus possessed the beatific vision from the moment of his conception. I am not comfortable with this traditional teaching. . . . How could Jesus have lived an authentic human life that is like ours in every way, sin excepted, if he, even during his life on earth, already possessed what we will possess only in heaven?¹⁰

Finally, Nicholas Lombardo complains that

Aquinas's strategy for making sense of Christ's beatific knowledge introduces significant discontinuities between Christ's affectivity and ours. His approach . . . jeopardize[s] his affirmation of the authenticity of Christ's humanity.¹¹

In other words, St. Thomas's teaching is dancing with Docetism.

Even several prominent Thomists who have argued against these revisionists, in support of St. Thomas's traditional conclusion, have done so not from the traditional premise of the Savior's perfection, but rather from new—often ingenious and illuminating but nonetheless new—arguments that do not require recourse to the perfection of the God-man. Guy Mansini reasons to the beatific knowledge from the evidence of the scriptures, in particular the sayings of Christ in the gospels.¹² However,

9 Ibid., 450–51.

10 Thomas G. Weinandy, "Jesus' Filial Vision of the Father," *Pro Ecclesia* 13 (2004): 189–90. See also Thomas G. Weinandy, "The Beatific Vision and the Incarnate Son: Furthering the Discussion," *The Thomist* 70 (2006): 605–15.

11 Nicholas E. Lombardo, *The Logic of Desire: Aquinas on Emotion* (Washington, DC: The Catholic University of America Press, 2011), 217.

12 Guy Mansini, "Understanding St. Thomas on Christ's Immediate

he explicitly refuses the perfection of Christ any place in this consideration.¹³ Simon Gainé has written a book-length defense of Christ's beatific knowledge, likewise arguing that Christ's having the beatific vision makes the most sense of the scriptural sources, not to mention the patristic witness and various theological puzzles.¹⁴ However, Gainé denies that such knowledge simply follows from Christ's perfection as the Incarnate Word.¹⁵ Thomas Joseph White has not denied the connection between Christ's beatific knowledge and his perfection, yet White's own argument in favor of the beatific knowledge does not proceed through this perfection, but rather through the doctrine of dyothelitism and the need to unify Christ's two wills so that his human actions might be properly theandric.¹⁶ White says,

If the human action of Jesus is to be the personal action of the Son of God, it must be immediately subject to the activity of the divine will which it expresses. This requires that the human intellect of Jesus possess the vision of God.¹⁷

In fact, far from arguing to Christ's beatific knowledge from his perfection, some of these Thomists have even used Christ's beatific knowledge to argue *against* his perfection, maintaining against St. Thomas that the beatific knowledge can justify

Knowledge of God," *The Thomist* 59 (1995): 91–124.

¹³ *Ibid.*, 96–101.

¹⁴ Simon Francis Gainé, *Did the Saviour See the Father? Christ, Salvation, and the Vision of God* (London: Bloomsbury T&T Clark, 2015).

¹⁵ Simon Francis Gainé, "Must an Incarnate Divine Person Enjoy the Beatific Vision?" in *Thomas Aquinas and the Crisis of Christology* (Ave Maria, FL: Sapientia Press, 2021), 126–38.

¹⁶ Thomas Joseph White, *The Incarnate Lord: A Thomistic Study in Christology* (Washington, DC: The Catholic University of America Press, 2017), 236–74.

¹⁷ *Ibid.*, 239. See also Thomas Joseph White, "Dyothelitism and the Instrumental Consciousness of Jesus," *Pro Ecclesia* 17 (2008), 396–422.

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imperfections in the infused or the acquired knowledge.¹⁸ Thus Gainé asserts that a robust account of the beatific knowledge allows one to moderate St. Thomas's allegedly excessive claims for Christ's infused knowledge, which to Gainé seems "truly the more vulnerable to criticism."¹⁹ Moreover, Gainé argues that St. Thomas attributes too much perfection to Christ's acquired knowledge as well.²⁰ Although White's argument for the beatific knowledge, while not relying on the traditional understanding of the fullness of Christ's perfection, is still compatible with it, White's argument for the infused knowledge is not. White restricts Christ's infused knowledge to only what is required for his saving mission, and he makes this knowledge conditioned by Christ's limited historical circumstances.²¹ Referring to the maximalist view that this paper will defend, White goes so far as to say,

One might characterize this viewpoint as unhelpfully Docetist, since it suggests that Christ's typically human behavior among us is slightly unreal or one given in appearance only.²²

18 In addition to Gainé and White, discussed later, see also Charles Rochas, *La science bienheureuse du Christ simul viator et comprehensor: selon les commentaires bibliques et la Summa theologiae de saint Thomas d'Aquin* (Paris: Les éditions du Cerf, 2019). Rochas worries that St. Thomas's "maximalist approach . . . can prove not only unmeasured but excessive. . . . Thomas does not sufficiently put into perspective the existential and kenotic depth of the voluntary abasement of Christ, who humbled himself by submitting to a lack of human knowledge and learning." *Ibid.*, 237 (translation mine).

19 Gainé, *Did the Saviour See the Father?*, 152. See also Simon Francis Gainé, "Is There Still a Place For Christ's Infused Knowledge in Catholic Theology and Exegesis?," *Nova et Vetera (English Edition)* 16 (2018): 601–15.

20 Simon Francis Gainé, "Christ's Acquired Knowledge According to Thomas Aquinas: How Aquinas's Philosophy Helped and Hindered His Account," *New Blackfriars* 96 (2015): 255–68.

21 Thomas Joseph White, "The Infused Science of Christ," *Nova et Vetera (English Edition)* 16 (2018): 617–41.

22 *Ibid.*, 629. See also Thomas Joseph White, "The Trinitarian Consciousness of Christ," in *Thomas Aquinas and the Crisis of Christology* (Ave Maria, FL:

There seem to be very few disciples of St. Thomas left who are willing to defend his maximalist view of our Lord's perfect human mind.²³

This embarrassed neglect of Christ's perfection is unfortunate, both because Christ really is perfect—*full of grace and truth* (Jn 1:14)—but also because, by limiting Christ's knowledge so drastically, modern Christology has failed to appreciate the

Sapientia Press, 2021), 99–125.

23 I know of only three exceptions: Joshua Lim, Luigi Iammarrone, and Dominic Legge. Joshua Lim argues that St. Thomas did rely on Christ's perfection in his arguments for Christ's various kinds of knowledge, and that he was correct to do so. Joshua H. Lim, "An Encyclopedic Pico Della Mirandola? Rethinking Aquinas on Christ's Infused Knowledge," *Nova et Vetera (English Edition)* 21 (2023): 147–174. Lim also supports St. Thomas's maximalist view of what Christ must have known—namely, everything: everything that ever has been and that ever will be. Lim's middle terms are taken not from Christ's identity as Wisdom incarnate, however, but rather from Christ's soteriological mission. Two contemporary Thomists who do argue for the absolute necessity of Christ's fullness of knowledge, not only in virtue of Christ's mission as Savior but even in virtue of his being the Incarnate Son, are Iammarrone and Legge. Iammarrone reasons from the hypostatic union itself and the principle that operation follows being, which he thinks entails that the eternal Word of the Father cannot be ignorant of the Father when he becomes man. "Constitutionally, the Word is the perfect image of the Father. Now, this image, an infinitely personal reality, when it is hypostatically communicated to the assumed humanity, cannot fail to impress on it its hypostatic characteristic, through which this must have repercussions cognitively in the intellectual sphere of the assumed humanity." Luigi Iammarrone, "La visione beatifica di Cristo Viatore nel pensiero di San Tommaso," *Doctor Communis* 36 (1983), 302 (translation mine). But for an objection to this argument, see Mansini, "Understanding St. Thomas on Christ's Immediate Knowledge of God," 92–95. Legge, on the other hand, reasons from the relations of the Most Holy Trinity to the conclusion that the Son's visible mission in the Incarnation must be accompanied by the invisible mission of the Holy Spirit, who naturally gives to the Son's humanity the fullness of grace and knowledge; see Dominic Legge, *The Trinitarian Christology of St. Thomas Aquinas* (Oxford: Oxford University Press, 2017), 145–57. But for an opposing interpretation of the entailments of Legge's argument—granted not an interpretation that Legge himself has endorsed—see Gaine, "Must an Incarnate Divine Person Enjoy the Beatific Vision?," 133–35.

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much more interesting limits that St. Thomas himself identifies in the perfect knowledge of Christ. These are limits that both prove Christ's humanity, contra Docetism, and also manifest the incomprehensible greatness of God, who infinitely exceeds even the graced capacity of the Incarnate Logos's own perfect created mind. For St. Thomas Aquinas, Christ is a comprehensor who cannot comprehend.²⁴

The present paper makes no pretensions to demonstrating that St. Thomas is correct in his theology of Christ's knowledge, even if I am convinced that he is. Its aims are much more modest: first, to present St. Thomas's theology on this subject, drawing upon his whole corpus but especially the *Summa Theologiae* to articulate his mature teaching on the perfection of Christ's three kinds of human knowledge; and second, to defend this theology against the charge of heresy, the accusation that such perfect beatific, infused, and acquired knowledge would make Christ less than fully human. This paper will have succeeded, not if it proves that St. Thomas's teaching is correct, but merely if it proves that he is not a Docetist.

Christ's Perfection In General

There can be no question that St. Thomas considers perfection an essential theme of his teaching on Christ Jesus. In his *Scriptum* on the *Sentences* of Peter Lombard, Thomas says, "We ought to attribute to Christ, in his soul, every spiritual perfection that can possibly be attributed to him."²⁵ In the *Summa contra*

²⁴ Obviously, there are two meanings of "comprehend" at work here, or else this nice paradox would be a meaningless contradiction: Christ as man "comprehends" in the sense of truly knowing God, but he does not "comprehend" in the sense of knowing God in a mode fully adequate to God's intrinsic intelligibility. See *STh* I, q. 12, a. 7, ad 1; and III, q. 10, a. 1.

²⁵ "Christo debemus attribuere secundum animam, omnem perfectionem spiritualem quae sibi potest attribui." *In III Sent.*, d. 18, a. 3, resp. See also *In III Sent.*, d. 14, a. 4, resp.: "Every power that can be communicated to any creature

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Gentiles, he argues, “It would have been unfitting for the Word, who is the font and origin of all perfections, . . . to unite himself to a nature that did not yet have perfection.”²⁶ Likewise in the *Compendium Theologiae*, Thomas writes, “No perfection vouchsafed to creatures can be denied to the soul of Christ, which is the most excellent of creatures.”²⁷ Then in his commentary on John, St. Thomas says that the Evangelist’s words *full of grace and truth* (1:14)

can be explained according to the perfection of [Christ’s] soul . . . since in his soul there was the fullness of all graces without any measure: *For the Spirit was not given by measure* (Jn 3:34); . . . [and] because his precious and blessed soul knew every truth, both divine and human, from the instant of his conception; whence Peter says to him, *You know all things* (Jn 21:17).²⁸

was communicated to him much more abundantly, namely so that elemental matter would obey him at a nod more than it would obey active qualities, or even celestial powers—and that he could move heaven more than any angel, if indeed angels move the spheres.” (“Omnis potentia quae alicui creaturae communicari potest, sibi communicata fuit multo abundantius, ut scilicet materia elementaris magis obediret sibi ad nutum quam activis qualitibus, vel etiam virtuti caelesti: et quod magis potuisset movere caelum quam aliquis Angelus; si tamen Angeli movent orbes.”)

26 “Inconveniens . . . fuisset ut Verbum, quod est fons et origo omnium perfectionum, . . . nondum perfectionem naturae habenti uniretur.” *Summa contra Gentiles* IV, ch. 44.

27 “Nulla perfectio creaturis exhibita, animae Christi, quae est creaturarum excellentissima, deneganda est.” *Compendium of Theology* I, ch. 216.

28 “possunt exponi secundum animae perfectionem . . . secundum quod in anima eius fuit plenitudo omnium gratiarum absque mensura aliqua; Io. III, 34: *non enim datus est Spiritus ad mensuram* . . . quia eius pretiosa et beata anima omnem veritatem, tam divinam quam humanam, ab instanti conceptionis cognovit; unde dicit ei Petrus: *tu omnia scis*.” *Super Ioan.* 1, lec. 8, n. 189. See also *Super Ioannem* 1, lec. 9, n. 199: “For Christ in the instant of his conception was perfect God and perfect man, having a rational soul perfect in the virtues, and a body distinct in all its features, although not in perfect quantity: *A woman shall enclose a man* (Jer 31:22), namely a perfect man.” (“Christus enim

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Once more in the *Compendium*, but commenting on this same verse from John's Prologue, St. Thomas writes,

From the very union of human nature to God in the unity of person, the consequence is that the soul of Christ was full of the gifts of grace . . . beyond all others; . . . from the very fact that the Word was made flesh, therefore, there is this effect: that he was full of grace and truth.²⁹

in instanti suae conceptionis fuit perfectus Deus et perfectus homo, habens rationalem animam perfectam virtutibus, et corpus omnibus lineamentis distinctum, non tamen secundum quantitatem perfectam; Ier. XXXI, 22: *mulier circumdabit virum, scilicet perfectum.*")

29 The full context: "As much as any creature draws closer to God, so much more does it participate in his goodness, and is it filled with more abundant gifts from his inflowing, just as those things participate more in the heat of fire that approach more closely to it. Yet there can neither be nor be thought any mode by which a creature would attach itself more closely to God, than that it should be joined to him in the unity of person. Therefore, from the very union of human nature to God in the unity of person, the consequence is that the soul of Christ was full of the gifts of grace, even habitual grace, beyond all others; such that the habitual grace in Christ is not a disposition to union, but rather an effect of union, which is manifestly apparent from this mode of speaking that the Evangelist uses in the aforementioned words, when he says, *We have seen him as the only-begotten of the Father, full of grace and truth.* Yet the only-begotten of the Father is the man Christ, inasmuch as the Word was made flesh; from the very fact that the Word was made flesh, therefore, there is this effect: that he was full of grace and truth." ("In quantum autem creatura aliqua magis ad Deum accedit, in quantum de bonitate eius magis participat, et abundantioribus donis ex eius influentia repletur, sicut et ignis calorem magis participant quae ei magis appropinquant. Nullus autem modus esse aut excogitari potest, quo aliqua creatura propinquius Deo adhaereat quam quod ei in unitate personae coniungatur. Ex ipsa igitur unione naturae humanae ad Deum in unitate personae, consequens est ut anima Christi donis gratiarum etiam habitualibus prae ceteris fuerit plena; ut sic habitualis gratia in Christo non sit dispositio ad unionem, sed magis unionis effectus, quod ex ipso modo loquendi quo Euangelista utitur in verbis praemissis manifeste apparet, cum dicit *Vidimus eum quasi unigenitum a Patre, plenum gratiae et veritatis.* Est autem unigenitus a Patre homo Christus, in quantum Verbum caro factum est; ex hoc igitur quod Verbum caro factum est, hoc effectum est ut esset plenus gratiae et veritatis.") *Comp. Theo.* I, ch. 214. Passages like this suggest that Mansini may have been too quick to dismiss Iammarone's claim that, for

In the *Summa Theologiae* as well, this theme of perfection is everywhere. In the first fifty-nine questions of the *Tertia Pars*, namely those questions of the *Summa Theologiae* devoted to our Savior, St. Thomas uses the words “pérfect,” “perféct,” and “perfection” 421 times. Seventy-three of these occur just in the four relatively short questions on Christ’s human knowledge which will occupy us here: Questions 9–12. In fact, these questions on knowledge find their place in the *divisio textus* of the *Tertia Pars* precisely under the heading of perfection. After St. Thomas has treated the fittingness of the Incarnation in Question 1 and the mode of the union in Questions 2–6, he turns to the perfections that Christ co-assumed in his human nature. These perfections are threefold:³⁰ concerning grace, knowledge, and power.³¹

While it is the middle category that primarily concerns us in this paper, it is worth noticing briefly that St. Thomas thinks the same rule applies in all three categories: Christ co-assumes the greatest possible perfections of grace, of knowledge, and of power that are consistent with the truth of his human nature. Christ’s grace, for example, Thomas calls “*perfectissima*”:³² absolutely full both intensively and with regard to its might,³³ which is something that can be said for no other creature³⁴ —and thus there is no sense in which his grace could possibly increase.³⁵ Nevertheless, there is still a limit on this grace, because Christ is truly man. “The soul of Christ,” St. Thomas insists, “has a finite capacity.”³⁶ His grace of union is infinite because the divine

St. Thomas, the perfection of Christ’s soul was a necessary consequence of the hypostatic union. See Mansini, “Understanding St. Thomas on Christ’s Immediate Knowledge of God,” 92–95.

30 For this tripartite division, see *STh* III, q. 7, Prologue.

31 Respectively, *STh* III, qs. 7 & 8; qs. 9–12; and q. 13.

32 *STh* III, q. 7, a. 2, resp.

33 *STh* III, q. 7, a. 9, resp.

34 *STh* III, q. 7, a. 10, resp.

35 *STh* III q. 7, a. 12, resp.

36 “Anima Christi . . . habet capacitatem finitam.” *STh* III, q. 10, a. 3, ad 2.

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person of the Son is infinite.³⁷ But his habitual grace—which, *nota bene*, according to St. Thomas follows automatically from the grace of union, as light from the sun,³⁸ as a “natural property”³⁹—this habitual grace is not infinite but finite, according to the measure of Christ’s finite human soul.⁴⁰ It is perfect, but it is not unlimited, because Christ’s humanity is not unlimited. All of this can be said, *mutatis mutandis*, for Christ’s power as well: His humanity is omnipotent, not simply speaking since this is impossible for a creature,⁴¹ but in relation to the execution of his human will.⁴² Both in grace and in power, therefore, Christ’s humanity is perfect, which is to say, as full as it could possibly be. Nevertheless, it is still set within limits, because what it is that is filled to the brim in both cases is still a finite created form, namely human nature. For St. Thomas, there is no possible natural addition that could be made to the God-man’s perfection here, because God has given to this sacred humanity the maximum that the nature can receive—but there are still mathematical additions one could imagine, because the maximum that the nature can receive is still finite, and “there is nothing on the part of finite quantity that is repugnant to [the] addition”⁴³ of some further mathematical quantity. Christ’s grace and power

37 *STh* III, q. 7, a. 11, resp.

38 *STh* III, q. 7, a. 13, resp.

39 *STh* III, q. 7, a. 13, ad 2. See also *In III Sent.*, d. 4, q. 3, a. 2, ad qa. 1: “Habitual grace . . . can . . . be said to be natural to Christ in two ways. In one way because it is in the mode of natural properties, which follow inseparably upon their subjects. In another way because it is caused by one of his natures, namely the divine nature, not the human.” (“*Gratia . . . habitualis potest . . . dici Christo naturalis dupliciter. Uno modo quia ad modum proprietatum naturalium se habet, quae suum subjectum inseparabiliter consequuntur. Alio modo quia ex altera suarum naturarum causatur, scilicet ex divina natura, non autem ex humana.*”)

40 *STh* III, q. 7, a. 11, resp.

41 *STh* III, q. 13, a. 1, resp.

42 *STh* III, q. 13, a. 4, resp.

43 “*Ex parte quantitatis finitae non est aliquid quod repugnet additioni.*” *STh* III, q. 7, a. 12, ad 1.

are perfect, therefore, but limited.

Our task in this paper is to explore in greater detail how this perfect-but-limited pattern applies also to all three kinds of knowledge in Christ's human mind: the beatific, the infused, and the acquired. As we have seen, most modern Christologists worry that if Christ should be allowed to have these knowledges or to be too perfect in all of them, then the truth of his humanity would be in jeopardy. For St. Thomas Aquinas, however, it is just the opposite. It is precisely because Christ is truly man that he has these three kinds of knowledge, since if Docetism were true and his humanity were an illusion, he would have only the divine knowledge which—in virtue of the divine simplicity—just is the divine mind, just is the divine essence.⁴⁴ Far from discrediting Christ's humanity, therefore, the beatific, infused, and acquired knowledges prove his humanity. Docetism would evacuate Christ of any human knowledge at all, whereas for St. Thomas, "The human mind is not evacuated through the light of the divine Word, but is rather perfected by it."⁴⁵ By its personal union to the Word, Christ's human mind is given the greatest possible participation in the divine wisdom—"The soul of Christ . . . reaches the ultimate grade possible for a creature"⁴⁶—but this is still just a participation, for his humanity is still just a creature. For St. Thomas, there is no need to add extra imperfections to Christ's knowledge, therefore, because even the most perfect human knowledge conceivable is still human. Even if every single potentiality of Christ's human mind is actualized—and according to St. Thomas, it is⁴⁷—still there is no

44 *STh* III, q. 9, a. 1, resp.

45 "Per lucem divini verbi non evacuatur mens hominis, sed magis perficitur."
STh III, q. 5, a. 4, ad 2.

46 "Anima Christi . . . pervenit ad ultimum gradum creaturae possibilem."
In III Sent., d. 14, a. 2, ad qa. 3, ad 2. See also *STh* III, q. 10, a. 4, c.; q. 11, a. 4, resp.

47 "For the soul, considered in itself, is in potency to knowing intelligible things, for it is as a tablet on which nothing is written; and nevertheless it is

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threat to Christ's true humanity, because what is actualized is precisely a human mind according to its human potentialities. Christ knows, exactly, everything a man can know, whether by his own discovery or by God's gift: no more and no less. And so for Thomas, it is the form of human nature, and that form alone, that sets limits to the perfection of Christ's three kinds of created knowledge. Let's take each of the three in turn.

Christ's Beatific Knowledge

The greatest knowledge that St. Thomas attributes to Christ's human mind is the beatific knowledge, by which Christ in his humanity beholds his own divinity.⁴⁸ On St. Thomas's telling, from his very conception Christ's human mind has been seeing the divine essence,⁴⁹ which means that there has never been a moment when his soul did not directly know his Father, and himself the eternal Son, and their common Holy Spirit. *I do know him* (Jn 8:55), Christ says of the Father, and St. Thomas thinks this beatific knowledge is the reason that claim is true.⁵⁰ While a Docetist might complain that such knowledge is superfluous, since Christ was already God and so already all-knowing and perfectly happy, St. Thomas insists that Christ is not only true God but also true man, and therefore that this beatific

possible that it should be written upon, on account of the possible intellect, in which there is the potency to become all things, as is said in the third book of the *De Anima*. Yet what is in potency is imperfect unless reduced to act. Yet it was not fitting that the Son of God should assume an imperfect human nature, but a perfect one." ("Anima enim, secundum se considerata, est in potentia ad intelligibilia cognoscenda, est enim sicut tabula in qua nihil est scriptum; et tamen possibile est in ea scribi, propter intellectum possibilem, in quo est omnia fieri, ut dicitur in III de anima. Quod autem est in potentia, est imperfectum nisi reducat ad actum. Non autem fuit conveniens ut filius Dei humanam naturam imperfectam assumeret, sed perfectam.") *STh* III, q. 9, a. 1, resp.

48 *STh* III, q. 9, a. 2; q. 10.

49 *STh* III, q. 34, a. 4, resp.

50 *STh* III, q. 9, a. 2, sc.

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knowledge is necessary, since without it the Son in his human nature would be unhappy and ignorant.⁵¹ The hypostatic union itself gave uncreated beatitude to Christ's humanity, by joining it to God, but, St. Thomas says,

In the human nature of Christ it was necessary that, besides this uncreated beatitude, there should be a certain created beatitude, through which his soul would be set in the last end of human nature.⁵²

Such is the role of the beatific knowledge: not to make Christ superhuman, but to set Christ's soul in the last end of human nature.⁵³

Far from doing violence to the truth of Christ's humanity, therefore, such beatific knowledge is profoundly natural to his soul, just as it is natural to all men's souls—not in the sense that any man can attain to the beatific vision on his own human strength, which would be Pelagianism, but in the sense that, because human nature is fashioned unto the image of God,

51 "The divinity is united to the humanity of Christ according to person, and not according to nature or essence, but with unity of person there remains the distinction of natures. And thus the soul of Christ, which is a part of human nature, is perfected through a certain participated light from the divine nature unto the knowledge of the blessed, by which God is seen through his essence." ("Divinitas unita est humanitati Christi secundum personam, et non secundum naturam vel essentiam, sed cum unitate personae remanet distinctio naturarum. Et ideo anima Christi, quae est pars humanae naturae, per aliquod lumen participatum a natura divina perfecta est ad scientiam beatam, qua Deus per essentiam videtur.") *STh* III, q. 9, a. 2, ad 1.

52 "praeter beatitudinem increatam, oportuit in natura humana Christi esse quandam beatitudinem creatam, per quam anima eius in ultimo fine humanae naturae constitueretur." *STh* III, q. 9, a. 2, ad 2.

53 This holds true regardless of one's commitments in the larger grace-nature controversies of the twentieth century. The narrow point here is just that seeing God's essence is truly perfective of man. For present purposes, even a merely obediential potency for the beatific vision would suffice. On the vision of the divine essence as man's last end, see also *STh* I-II, q. 3, a. 8.

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every man by his nature really is capable of receiving this vision if God should bestow it upon him, and if a man should so receive it, he is perfected by it.⁵⁴ Christ's beatific knowledge actualizes the highest operative potency of his nature, the capacity to see God—but this is still a potency of human nature. And so those modern Christologists who worry that the beatific knowledge would make Christ no longer human should also be worried, by the same logic, that the saints in heaven are no longer human—when the truth is that both Christ and the blessed are more fully realized in their humanity than any man who is not seeing God.⁵⁵ In this regard, Christ himself is the most fully human of all.⁵⁶

[Since] the soul of Christ is joined more closely to the Word of God than is any other creature, since it is united to the Word in person . . . thus does [his soul] receive more fully the inflowing of the light in which God is seen by the Word. . . . And for this reason he sees the First Truth itself, which is the essence of God, more perfectly than all other creatures.⁵⁷

Not only that, but Christ as man also sees all other things in the Word—and for St. Thomas, this really does mean *all* other things: “all things that, in any way whatsoever, are or were or will be, either done or said or thought, by anyone or anything at

54 *STh* III, q. 9, a. 2, ad 3. See also *STh* I, q. 12, a. 1, resp.

55 *STh* III, q. 11, a. 2, ad 2.

56 Of course, I am not speaking here in terms of first act, since thus all men are equally human in virtue of their common human nature, but rather in terms of second act, according to which one man is said to be more human than another inasmuch as he has been more fully perfected as man in his actions and accidents.

57 “verbo Dei propinquius coniungitur anima Christi, quae est unita verbo in persona, quam quaevis alia creatura . . . ideo plenius recipit influentiam luminis in quo Deus videtur ab ipso verbo. . . . Et ideo prae ceteris creaturis perfectius videt ipsam primam veritatem, quae est Dei essentia.” *STh* III, q. 10, a. 4, resp.

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any time.”⁵⁸ In seeing his own divine essence, the human mind of Christ sees every creature in every time in its every detail as well, even the hidden thoughts of men.⁵⁹

According to St. Thomas Aquinas, Christ’s beatific knowledge is absolutely perfect; nevertheless, it is not unlimited, for it is still the beatific knowledge of a finite human soul. Therefore, Christ’s beatific knowledge comes up against the same upper limit that St. Thomas had identified for all created beatific knowledge back in the *Prima Pars*: It cannot comprehend God.⁶⁰ It cannot know him to the degree that he is knowable. For God is infinitely knowable, and so to know him totally would require an infinite act of knowing, which no creature could possibly have—including the created mind of Christ. Wherefore St. Thomas:

It is impossible that any creature should comprehend the divine essence . . . because the infinite cannot be comprehended by the finite. And thus it must be said that the soul of Christ in no way comprehends the divine essence.⁶¹

This is an astonishing insight: Even now, resting and reigning at the right hand of the Father, Christ in his humanity cannot comprehend his own divinity. “Know thyself,” the Delphic oracle had commanded all men, but Jesus himself cannot do it, not fully, not by his human mind.⁶² In fact, he fails by an infinite measure.

⁵⁸ “omnibus quae quocumque modo sunt vel erunt vel fuerunt, vel facta vel dicta vel cogitata a quocumque, secundum quodcumque tempus.” *STh* III, q. 10, a. 2, resp.

⁵⁹ “The soul of Christ knows in the Word all things existing at whatever time, and even the thoughts of men, of which he is the judge.” (“Anima Christi in verbo cognoscit omnia existentia secundum quodcumque tempus, et etiam hominum cogitatus, quorum est iudex.”) *Ibid.*

⁶⁰ *STh* I, q. 12, a. 7, resp.

⁶¹ “Est autem impossibile quod aliqua creatura comprehendat divinam essentiam, . . . eo quod infinitum non comprehenditur a finito. Et ideo dicendum quod anima Christi nullo modo comprehendit divinam essentiam.” *STh* III, q. 10, a. 1, resp.

⁶² Nevertheless, of course he does comprehend his own divine essence by his

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In his humanity he sees God, and indeed the whole of God, but not wholly.⁶³ Christ was *simul viator et comprehensor*, and now is pure *comprehensor*, and yet he does not comprehend.⁶⁴ So while modern Christologists may fret that St. Thomas has made Christ superhuman by attributing to him such perfect beatific knowledge, the truth is that even this perfect knowledge is perfectly human. As Thomas insists in this very article,

The union of natures in the person of Christ occurred in such a way that nevertheless the properties of each nature remained unconfused, namely such that the uncreated remained uncreated, and the created remained within the limits of a creature.⁶⁵

Christ's beatific knowledge is as perfect as any creature's beatific knowledge ever could be, but no more.⁶⁶ He remains within the limits of a creature.

Christ's Infused Knowledge

The second kind of created knowledge that St. Thomas claims for Christ is his infused knowledge: the knowledge of all creatures which God poured into his human mind from his conception.⁶⁷ As scriptural evidence of this quasi-omniscience of created things, St. Thomas points to Colossians, where St. Paul

divine mind; see *STh* I, q. 14, a. 3, resp.

63 *STh* III, q. 10, a. 1, ad 2.

64 *STh* III, q. 15, a. 10, resp. Again, "comprehend" is being said in two ways: Christ as man "comprehends" in the sense of truly knowing God, but he does not "comprehend" in the sense of knowing God in a mode fully adequate to God's intrinsic intelligibility. See *STh* I, q. 12, a. 7, ad 1.

65 "Sic facta est unio naturarum in persona Christi quod tamen proprietates utriusque naturae inconfusa permansit, ita scilicet quod increatum mansit increatum, et creatum mansit infra limites creaturae." *STh* III, q. 10, a. 1, resp. This last clause is a quote from St. John Damascene.

66 *In III Sent.*, d. 14, a. 2, ad qa. 3, ad 2.

67 *STh* III, q. 9, a. 3; q. 11.

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says that *in [Christ] are hid all the treasures of wisdom and knowledge* (2:3).⁶⁸ But Thomas's own proper argument for the infused knowledge is once again from Christ's perfection:

It was fitting that the human nature assumed by the Word of God not be imperfect. Yet everything that is in potency is imperfect unless it be reduced to act. But the human possible intellect is in potency to all intelligible things, and it is reduced to act through intelligible species, which are certain forms that complete it. . . . And thus it is necessary to posit an infused knowledge in Christ, inasmuch as through the Word of God there were impressed onto the soul of Christ, personally united to it, the intelligible species of all things to which the possible intellect is in potency.⁶⁹

Although several contemporary Thomists have described this infused knowledge primarily in terms of the prophetic knowledge treated by St. Thomas at the end of the *Secunda Secundae*,⁷⁰ in fact St. Thomas's preferred comparison is to the angelic knowledge⁷¹ that he treated in the *Prima Pars*.⁷² Specifically, this is Christ's version of the evening knowledge of the angels,

⁶⁸ *STh* III, q. 9, a. 3, sc.

⁶⁹ "Decebat quod natura humana assumpta a verbo Dei, imperfecta non esset. Omne autem quod est in potentia, est imperfectum nisi reducatur ad actum. Intellectus autem possibilis humanus est in potentia ad omnia intelligibilia. Reducitur autem ad actum per species intelligibiles, quae sunt formae quaedam completivae ipsius. . . . Et ideo oportet in Christo scientiam ponere inditam, in quantum per verbum Dei animae Christi, sibi personaliter unitae, impressae sunt species intelligibiles ad omnia ad quae est intellectus possibilis in potentia." Ibid.

⁷⁰ *STh* II-II, qs. 171–74.

⁷¹ Between Questions 9 and 11, St. Thomas mentions angelic knowledge twenty-six times in his treatment of the infused knowledge of Christ, including devoting an entire article to their comparison; see *STh* III, q. 11, a. 4. Yet he mentions prophecy only once, and it is clear in context that he does not think it is equivalent to Christ's infused knowledge at all, but rather correlates with only a small part of the latter's content; see *STh* III, q. 11, a. 1, resp.

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the knowledge they have of created things in themselves, which is a complement to their—and his—morning knowledge of those same things as seen in the Word.⁷³ And since, once again, Christ's knowledge will be as perfect as it possibly can be, this infused knowledge extends to everything to which Christ's possible intellect is in potency, whether naturally or obedientially.⁷⁴ By it he knows everything that a man can discover, or that God can reveal, of created things⁷⁵—and this not just generically, but singularly.⁷⁶ This means, for example, that from conception he knew every language mankind would ever develop, even those he would have no use for himself.⁷⁷ St. Thomas says that this knowledge was habitual, but only in the sense that all knowledge is habitual inasmuch as knowledge just is an intellectual habit.⁷⁸ All of this habitual knowledge could be actualized by Christ—that is, actively thought about—any time he liked.⁷⁹ He did not even need to turn to phantasms, as ordinary men have

72 *STh* I, qs. 54–58.

73 *STh* I, q. 58, as. 6–7.

74 *STh* III, q. 11, a. 1, resp.

75 “Thus according to [this infused knowledge] the soul of Christ knows first of all whatever can be known by man through the power of the light of the agent intellect, just as whatever pertains to the human sciences. Second, through this knowledge Christ knows all those things that are made known to men through divine revelation. . . . For the soul of Christ knows all of those more abundantly and more fully than anyone else.” (“Et ideo secundum eam anima Christi primo quidem cognovit quaecumque ab homine cognosci possunt per virtutem luminis intellectus agentis, sicut sunt quaecumque pertinent ad scientias humanas. Secundo vero per hanc scientiam cognovit Christus omnia illa quae per revelationem divinam hominibus innotescunt, sive pertinent ad donum sapientiae. . . . Omnia enim ista abundantius et plenius ceteris cognovit anima Christi.”) *Ibid.*

76 *STh* III, q. 11, a. 1, ad 3.

77 *STh* III, q. 7, a. 7, ad 3.

78 *STh* III, q. 11, a. 5, sc.

79 “He could use it whenever he wanted.” (“Poterat enim ea uti quando volebat.”) *STh* III, q. 11, a. 5, resp. See also ad 2.

to do during this earthly pilgrimage, in order to use it.⁸⁰ Like his beatific knowledge, Christ's infused knowledge is the greatest there is, surpassing even that of the highest angels in its quantity and certitude and light.⁸¹

Yet once again, this perfect knowledge is also a limited knowledge—and limited precisely by the limits of human nature. For one thing, even though Christ's infused knowledge is greater than that of the angels in terms of what he knows, it is lesser in terms of his manner of knowing it.⁸² For the angels know in a higher way, by fewer and more unified forms, than men. But Christ is a man, ergo etc. Another limit is that, as with all of Christ's human knowledge, this infused knowledge is merely received by him as man—whereas it is given by him only as God.⁸³ Furthermore, all that he knows as man he knows infinitely less clearly than he knows it as God.⁸⁴

80 *STh* III, q. 11, a. 2, resp. This argument has an interesting consequence. St. Thomas argues in many places that Christ had a perfect body with perfectly formed organs from the first instant of his conception. *STh* III, q. 33, a. 1; q. 34. *ScG* IV, ch. 44. *Super Ioan.* 1, lec. 9, n. 199. Nevertheless, the consequence of this argument about Christ not needing to turn to phantasms in order to use his infused knowledge is that even if, for the sake of argument, his brain were not fully developed from conception, still he would have total access to his infused knowledge of all created things. For the brain does not relate to the intellect as its organ but only as its object, providing the phantasms. See *In De Anima* III.4, ns. 684–88. In other words, the brain relates to the intellect not as the eyes to sight but rather as color to sight. And yet even this analogy limps, St. Thomas shows, because whereas color is the final object of sight, phantasms are not the final object of the intellect, but only the means it ordinarily uses to come to know its true object: intelligible species. *STh* III, q. 11, a. 2, ad 1. But Christ has these intelligible species, independent of any phantasm, infused into his soul from its creation. And thus from his conception Christ would know all things, and would be able actively to consider all things, even if his brain and other organs were not yet developed.

81 *STh* III, q. 11, a. 4, resp.

82 *STh* III, q. 11, a. 6, resp. See also a. 4, resp.

83 St. Thomas makes this explicit as regards Christ's grace, but by the same logic it is true also of knowledge. *STh* III, q. 7, a. 7, ad 2.

84 "The knowledge of God infinitely exceeds the knowledge of the soul of

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But there is also a more theologically interesting limit, one not made explicit by St. Thomas about Christ's infused knowledge—that is, his evening knowledge—but which we are yet permitted to apply to it since Thomas does make it explicit about Christ's morning knowledge, and he also explicitly identifies the content of these two knowledges, the morning and the evening, the “double knowledge”⁸⁵ of Christ. The limit is this: While Christ's human mind really does know all the things that God has created, is creating, or will create—and these down to their very last detail—nevertheless he does not know all the things that God could have created, but never will.⁸⁶

For this would be to comprehend all that God can do, which would be to comprehend the divine power, and consequently the divine essence; for any power is known through the knowledge of all that it is able to do.⁸⁷

In other words, the infused knowledge has the same limit as the beatific knowledge: By it Christ in his humanity can know

Christ, as regards the clarity of knowing. . . . The uncreated light of the divine intellect infinitely exceeds whatever created light is received in the soul of Christ.” (“Scientia tamen Dei excedit in infinitum, quantum ad claritatem cognitionis, scientiam animae Christi. . . . Lumen increatum divini intellectus in infinitum excedit lumen creatum quodcumque receptum in anima Christi.”) *STh* III, q. 10, a. 2, ad 3.

⁸⁵ “duplex cognitio.” *STh* III, q. 9, a. 3, resp.

⁸⁶ This is not to say that Christ as man cannot know any of them, nor even that he cannot know a great many of them, as many as God sees fit to share with him. It is only to say that, in principle, he cannot know all of them. One example of something Christ knows in his human mind that is simply in the power of God is that Tyre and Sidon would have repented if the miracles done in Capernaum were done in them. See Mt 11:21; Lk 10:13. See also *Super Mattheam* 11, lec. 3, ns. 949–51.

⁸⁷ “Hoc enim esset comprehendere omnia quae Deus potest facere, quod esset comprehendere divinam virtutem, et per consequens divinam essentiam; virtus enim quaelibet cognoscitur per cognitionem eorum in quae potest.” *STh* III, q. 10, a. 2, resp. See also *STh* I, q. 15, a. 3, resp.

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everything that a man can possibly know, but no man can comprehend God, either in essence or in power—which in God are the same thing anyway—and so neither can Christ as man comprehend all that God could do.⁸⁸ He has an infused knowledge of everything that God knows by vision, but not of what God knows by simple intelligence.⁸⁹ For this reason, St. Thomas says, Christ’s human mind does not know the actually infinite, because it only knows everything that will have existed, and everything that will have existed is actually finite, and merely potentially infinite.⁹⁰ Thus, once again, Christ’s perfect knowledge is shown to be a perfect human knowledge, and not a Docetic counterfeit.

Christ’s Acquired Knowledge

Christ’s third and final kind of created knowledge is his acquired knowledge, his experiential knowledge.⁹¹ Of course this is

88 “To comprehend the essence of something and to comprehend its power amount to the same: For everything can act inasmuch as it is in act. If therefore the soul of Christ does not prevail to comprehend the essence of the divinity, as has been shown, it is impossible that he should comprehend the divine power. Yet he would comprehend his power if he were to know whatever God can do, and by what *rationes* he can produce effects. Therefore the soul of Christ does not know whatever God can do, or by what *rationes* he can work.” (“Eiusdem rationis est comprehendere essentiam alicuius rei et virtutem ipsius: unumquodque enim potest agere in quantum est actu. Si igitur anima Christi essentiam divinitatis comprehendere non valet, ut ostensum est, impossibile est ut divinam virtutem comprehendat; comprehenderet autem eius virtutem si cognosceret quidquid Deus facere potest, et quibus rationibus effectus producere possit: non igitur anima Christi cognoscit quidquid Deus facere potest, vel quibus rationibus possit operari.”) *Comp. Theo.* I, ch. 216.

89 *STh* III, q. 10, a. 2, ad 2.

90 *STh* III, q. 10, a. 3, resp.

91 *STh* III, q. 9, a. 4; q. 12. St. Thomas admits that, earlier in his career, he had made a mistake in failing to distinguish adequately between the infused and acquired knowledge; see *STh* III, q. 12, a. 2, resp. In the *Sentences* commentary, for example, this failure caused Thomas inadvertently to introduce imperfections into the confused infused-acquired-hybrid knowledge of Christ, since the perfection of one would be the imperfection of the other. See, for example,

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the kind of knowledge that is most familiar to us, because as St. Thomas says, the beatific knowledge is a participation in what is properly proportioned to God, the infused knowledge in what is proportioned to the angels, but acquired knowledge is proportionate to man.⁹² It is important that Christ be perfect in all of these, because all realize potentialities native to the human mind. Just as the infused knowledge was necessary lest Christ's possible intellect should be left in potency, so the acquired knowledge is necessary lest his agent intellect should be left in potency, since for St. Thomas such potency would be an inadmissible imperfection.⁹³ By this acquired knowledge Christ learns for himself, as it were, shining the light of his agent intellect upon phantasms given by the senses and abstracting intelligible species from them—species that correspond to things he knew already, by a distinct habit, in his infused knowledge.⁹⁴

The acquired knowledge of Christ is the same sort of knowledge you and I acquire every day. But according to St. Thomas, whereas in us this knowledge is imperfect, in Christ it is as perfect as possible. Thus by the time he was fully grown,⁹⁵ Christ's acquired knowledge extended to absolutely everything to which the agent intellect is in potency.⁹⁶ Although it is true that he could not have had every possible experience, nevertheless he is so brilliant that he reasoned to the knowledge of all things from that limited set of things he did experience.⁹⁷ Furthermore, unlike us, Christ learned nothing whatsoever

In III Sent., d. 14, a. 3, ad qa. 1; ad qa. 5.

⁹² *STh III*, q. 9, a. 4, resp.

⁹³ *Ibid.*

⁹⁴ *STh III*, q. 9, a. 4, ad 2 & ad 3.

⁹⁵ *STh III*, q. 12, a. 2, ad 1. St. Thomas suggests that this means roughly age twelve; see *STh III*, q. 12, a. 3, ad 3.

⁹⁶ *STh III*, q. 12, a. 1, resp.

⁹⁷ *STh III*, q. 12, a. 1, ad 1.

from anyone else, neither Mary nor Joseph nor any other man,⁹⁸ nor even from an angel.⁹⁹ For it is more perfect to teach oneself than to be taught by another, and as we have seen, for St. Thomas Christ's knowledge was as perfect as can be.¹⁰⁰

However—and by now this pattern should be familiar—St. Thomas insists that this perfect acquired knowledge is still limited by the form of Christ's human nature. Needless to say, there is no question here of this knowledge being able to comprehend God in his essence or power. If Christ's two supernatural knowledges could not do this, *a fortiori* his natural acquired knowledge certainly cannot. But the limits on the acquired knowledge are even stricter than that. Unlike the beatific and infused knowledge, the acquired knowledge does not even extend as far as the angels.¹⁰¹ For whereas man's possible intellect is in potency to knowing the separated substances in themselves, if the knowledge of them should be infused into it from above, man's agent intellect is in no such potency, since the agent intellect works upon sensory phantasms, but the angels are not material and so cannot be sensed. Nor, again, does Christ by his acquired knowledge know the past or future singulars that he knows in his morning and evening knowledge, because there is no way to reason to those using the light of the agent intellect.¹⁰² Finally, and again unlike his beatific and infused knowledge, Christ's acquired knowledge was not perfect simply speaking from his conception, because the whole point of acquired knowledge is that one has to go out and acquire it.¹⁰³ It was,

98 *STh* III, q. 12, a. 3, resp.

99 *STh* III, q. 12, a. 4, resp.

100 *STh* III, q. 12, a. 3, ad 2. On Christ's own teaching, see *STh* III, q. 42.

101 *STh* III, q. 12, a. 1, ad 3.

102 *Ibid.* The Blackfriars translation erroneously adds the word "present" to this passage, denying Christ any acquired knowledge even of present singulars. But this is absurd, since even ordinary men have acquired knowledge of present singulars; see *STh* I, q. 86, a. 1.

103 *STh* III, q. 12, a. 2, resp.

nevertheless, always perfect relatively speaking: relative to his particular age,¹⁰⁴ for St. Luke says that the Christ Child grew in age and knowledge together.¹⁰⁵ And so, while Christ's acquired knowledge is wildly more impressive than we could dream of having for ourselves, it is still only as impressive as human acquired knowledge can actually become. It is natural knowledge fully realized, nothing more. Thus, for the third time, we see that Christ's created knowledge is perfect, but limited.

Conclusion

Docetiphobia has caused modern Christologists, regrettably even some excellent Thomists, to deny Christ the perfection of knowledge affirmed for him by St. Thomas Aquinas. The present paper has sought to show that removing this perfection from Christ is unnecessary, because St. Thomas Aquinas had already secured the perfect knowledge of Christ against Docetism. According to St. Thomas, in Christ's beatific, infused, and acquired knowledge, the God-man is as perfect as humanly possible—no more, and precisely no less.

One of the unfortunate consequences of Docetiphobia has been that, when modern Christologists introduce some lower limit for Christ's knowledge, they reveal something about themselves, the kind of Christological excellence that would make each of them uncomfortable. But when St. Thomas exalts Christ's human mind to the highest possible limit, he reveals something, not about himself, but about God—not to mention something about human nature, since in all three categories of knowledge he is carefully marking its boundaries. Thus one of the benefits to maintaining the perfection of Christ's human mind is that it teaches an important theological lesson, one that gets obscured

¹⁰⁴ *STh* III, q. 12, a. 2, ad 2.

¹⁰⁵ *STh* III, q. 12, a. 2, ad 1.

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when Christ's knowledge is not allowed to be as great as humanly possible. The lesson is this: No matter how perfect a created intellect may be, God himself is infinitely greater. In his essence and in his power, God is incomprehensible even to the human mind of the incarnate Son, even though this mind receives as much light as any creature ever could. In gazing upon his own divine essence, Christ's human intellect still falls infinitely short of exhausting it. As the eternal Word, he himself is the only adequate Logos or idea of the Father. And as man, even as perfect man, he is infinitely less than that. Even the Light of the World encounters the "darkness" of God—which darkness is, of course, actually the impossibly dazzling light of God's infinite intelligibility. Christ's perfect, and perfectly deficient, human knowledge gives us an awe-inspiring theological insight into the grandeur of God. It would be a shame to lose it.

In this paper I have defended St. Thomas against the charge of Docetism, and I have argued that his account of Christ's perfect knowledge is much more theologically enlightening than the lackluster modern alternatives. What I have not done is argued positively that St. Thomas is correct, nor can I hope to do so in this brief conclusion either. Nevertheless, I will end by offering a short meditation, which, although it will not prove Thomas's position, I hope might help to bring order to our sensibilities, so that we can consider the issue more soundly in the future.

It seems to me that the primary motivation of those who want to deny Christ the perfections that St. Thomas attributes to him is a desire to make Christ seem more relatable to us. In itself, of course, that desire is understandable. But consider this: As Christians, we are supposed to love Jesus more than ourselves.¹⁰⁶ We are supposed to want him to be happy more than we want ourselves to be happy. Therefore, I would propose, our first instinct should be to want Jesus to have every possible

¹⁰⁶ *STh* II-II, q. 26, a. 3.

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perfection, for his sake, because we love him. It should not be to remove perfections from him that would contribute to his happiness, for our sake, because we love ourselves. And so, while there could conceivably be some theological reason why we would have to disagree with St. Thomas and deny these perfections of knowledge to Christ, as Christians we should hope that there is not—and that our beloved Jesus gets to have every perfection St. Thomas Aquinas believes he has.

Besides, if St. Thomas is right, Christ's being perfect in knowledge is ultimately better for us too: "It was necessary that the soul of Christ should be perfect in the habits of knowledge, . . . in order for him to have the ability to satisfy [for our sins]."¹⁰⁷ But that is another discussion for another day.¹⁰⁸

¹⁰⁷ "Oportuit animam Christi perfectam esse quantum ad habitus scientiarum, . . . ut haberet facultatem satisfaciendi." *STh* III, q. 14, a. 1, ad 1. See also *Comp. Theo.* I, ch. 226: "Therefore Christ ought not to have assumed those defects by which man is separated from God, . . . as for example the privation of grace, ignorance, and things of this sort. For through this he would have been rendered less fit to satisfy [for us]; indeed, in order to be the author of human salvation, it was required that he should possess the fullness of grace and wisdom." ("Non igitur Christus illos defectus assumere debuit quibus homo separatur a Deo, licet sint poena peccati, sicut privatio gratiae, ignorantia et huiusmodi. Per hoc enim minus idoneus ad satisfaciendum redderetur; quinimmo ad hoc quod esset actor humanae salutis, requirebatur ut plenitudinem gratiae et sapientiae possideret.") See also Philippe de la Trinité, *What Is Redemption? How Christ's Suffering Saves Us* (Steubenville, OH: Emmaus Road Publishing, 2021), 67, 83–86, 98.

¹⁰⁸ See Bruce Marshall, "From His Fullness We Have All Received: Understanding the Human Knowledge of Christ," in a festschrift for Joseph Wawryk (forthcoming).

UNFOLDING NEWMAN'S IDEA OF THE UNIVERSITY

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John Henry Cardinal Newman's *The Idea of a University* is a compilation of a series of lectures that he gave in 1852 in defense of the Catholic university. Following the 1850 Synod of Thurles, Pius IX had asked the Bishops of Ireland to establish a Catholic university in his encyclical *Optime Noscitis*. They complied, and in 1851, on behalf of the bishops of Ireland, Archbishop Paul Cullen asked the church's most famous new convert, John Henry Newman, to be the new Catholic University of Ireland's first rector. The university began in 1854 with seventeen registered students, and Newman took the oath of office on the Feast of Pentecost.¹

Even in Ireland, however, a Catholic university could easily be considered a fool's errand. The specter of clericalism loomed as large in the nineteenth century as it does in the twenty-first,

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¹ Newman, exasperated by the bishops and especially by Archbishop Cullen, would resign just four years later, on November 12, 1858.

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and Ireland's bishops were criticized for preventing lay administration, which hindered the ready acquisition of a charter to grant degrees. Moreover, Dublin's Catholics had grown comfortable with sending their children to the prestigious and protestant Trinity College. The most fundamental opposition, however, was against the idea of a university being Catholic. Dublin's own George Bernard Shaw is often quoted for later calling the "Catholic university" a contradiction in terms. Of course, such a criticism of the Catholic university is not restricted to the nineteenth century British Isles. Dennis O'Brien, author of *The Catholic Idea of a University*, claims,

The traditions of church and university are radically different ideological traditions, and nothing but disaster results from assimilation . . . [T]hese traditions are in conflict, and so an attempt to blend university and church into one happy, syncretic whole will end in the corruption of both.²

In 1852, Newman gave the lectures we now know as *The Idea of a University* to counter objections to the Catholic university. Given the nature of a university, he argued, not only is a Catholic university not a contradiction, it is a university in its most complete sense. Newman articulates his idea in the form of a definition: a university is "a place of *teaching* universal *knowledge*."³ Despite the definition's unremarkable appearance, it contains surprising implications and the main thread of Newman's argument. Three aspects of this definition will form the structure of our consideration. First, we will consider that the university aims at knowledge in itself. It is an intellectual

2 Dennis O'Brien, "One, Holy, Catholic and Somewhat Infallible," *America* (1987): 276.

3 John Henry Newman, *Idea of a University* (London: Longmans, Green, and Co., 1907), ix; emphasis in original.

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endeavor through and through and contains within itself its own end. Second, its function is to teach and to teach specifically an intellectual tradition—which for Newman was the perennial understanding of western civilization. Its function is not the discovery of new knowledge. Third, the university is a place of *universal* knowledge. In some sense, its object is the whole. Here we see most clearly the need for Catholicism: there is no universal knowledge without theology, and theology is grounded primarily, though not exclusively, in Christ’s Church.⁴ After considering these three aspects of Newman’s definition, we will consider Newman’s reasons for why the university must be Catholic to be a university in its fullest sense.

First: A University Aims at Knowledge for Its Own Sake

Perhaps the most surprising claim of the work, and one most heavily criticized, is that the chief goal of a university is to communicate knowledge for itself rather than to train a student for a profession. Newman takes an ancient view of the primary purpose of education. A genuinely choice-worthy education—that is, a liberal education—an education a free man of means would choose—does not give one “knowledge in a vague and ordinary sense.” Rather, the university should aim at teaching that knowledge “especially called Philosophy.”⁵

⁴ Newman says, “If the Catholic Faith is true, a University cannot exist externally to the Catholic pale, for it cannot teach Universal Knowledge if it does not teach Catholic theology. This is certain; but still, though it had ever so many theological Chairs, that would not suffice to make it a Catholic University; for theology would be included in its teaching only as a branch of knowledge, only as one out of many constituent portions, however important a one, of what I have called Philosophy. Hence a direct and active jurisdiction of the Church over it and in it is necessary, lest it should become the rival of the Church with the community at large in those theological matters which to the Church are exclusively committed.” Newman, *Idea*, 214–15.

⁵ Newman, *Idea*, 111.

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When, then, we speak of the communication of Knowledge as being Education, we thereby really imply that that Knowledge is a state or condition of mind; and since cultivation of mind is surely worth seeking for its own sake, we are thus brought once more to the conclusion, which the word "Liberal" and the word "Philosophy" have already suggested, that there is a Knowledge, which is desirable, *though nothing come of it*, as being of itself a treasure, and a sufficient remuneration of years of labour.⁶

In Newman's mind, the question is simple: should a university do its best to perfect the intellect or not? Surprising as his claim may be, especially since universities today advertise themselves quite differently, the philosophy taught at a university is not practical, nor is its object moral, but rather it is speculative in the finest sense, as leading to contemplation.

The cultivation provided by the university should produce intellectual excellence. Newman says,

Liberal Education, viewed in itself, is simply the cultivation of the intellect, as such, and its object is nothing more or less than intellectual excellence. Everything has its own perfection, be it higher or lower in the scale of things; and the perfection of one is not the perfection of another.⁷

⁶ Newman, *Idea*, 114; emphasis added. I take it as evident that the claiming that a knowledge of philosophy is desirable for its own sake does not preclude it from an ancillary role with regard to theology. We shall see later that Newman considers the lower disciplines as subordinate to theology. See also Newman, *Idea*, 181. In fact, given the context of his entire argument, Newman seems to be using philosophy here as synonymous with liberal knowledge as wisdom—revealed theology being wisdom's highest form; see, for instance, Newman, *Idea*, 108–109, 121.

⁷ Newman, *Idea*, 121.

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What makes a man educated is neither skills nor moral probity nor spiritual sanctity, but formed judgment.⁸ Everything has its own perfection. The university is for the mind's perfection.

There is a physical beauty and a moral: there is a beauty of person, there is a beauty of our moral being, which is natural virtue; and in like manner there is a beauty, there is a perfection, of the intellect. . . The artist puts before him beauty of feature and form; the poet, beauty of mind; the preacher, the beauty of grace: then intellect too, I repeat, has its beauty, and it has those who aim at it. To open the mind, to correct it, to refine it, to enable it to know, and to digest, master, rule, and use its knowledge, to give it power over its own faculties, application, flexibility, method, critical exactness, sagacity, resource, address, eloquent expression, is an object as intelligible (for here we are inquiring, not what the object of a Liberal Education is worth, nor what use the Church makes of it, but what it is in itself), I say, an object as intelligible as the cultivation of virtue, while, at the same time, it is absolutely distinct from it.⁹

Who could deny that the well-formed mind described by Newman would prove useful? Newman does not deny that practical and moral benefits can come from university education.¹⁰

⁸ See Newman, *Idea*, xvi.

⁹ Newman, *Idea*, 122

¹⁰ While the knowledge that the university teaches as an end in itself is "sufficient remuneration," Newman also advocates for the many practical and spiritual advantages of the education that the university offers. Thus, Newman says, "when the Church founds a University, she is not cherishing talent, genius, or knowledge, for their own sake, but for the sake of her children, with a view to their spiritual welfare and their religious influence and usefulness, with the object of training them to fill their respective posts in life better, and of making them more intelligent, capable, active members of society." Newman, *Idea*, xii. Moreover, Newman is aware that the university as an institution is practical. In other words, universities are active institutions, not contemplative ones, but

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Indeed, these treasures are the most obvious benefits of the university, but they are not an education's true gold.¹¹ Every human power or faculty has its own proper perfection, by which it is made beautiful. An education that perfects the mind is an education proper, and such is the purpose of the university.

When Athens condemned Socrates to death, it did so in part because of his unique ability to influence the young especially regarding their theological beliefs. Despite the youth's susceptibility to be overcome with passion, reason has ever maintained great sway over their ideals. The young are not so jaded as skeptically to dismiss a kind of knowledge so noble that it needs nothing beyond itself to have value. By adhering faithfully to its mission of intellectual formation for its own sake, a university wields unrivaled power in shaping the youth.

Sanctity has its influence; intellect has its influence; the influence of sanctity is the greater in the long run; the influence of intellect is greater at the moment. Therefore, in the case of the young, whose education lasts a few years, where the intellect is, there is the influence. Their literary, their scientific teachers, really have the forming of them. Let both influences act freely, and then, as a general rule, no system of mere religious guardianship which neglects the Reason will in matter of fact succeed against the School. Youths need a masculine religion, if it is to carry captive their restless imaginations, and their wild intellects, as well as to touch their susceptible hearts.¹²

they are ordered to educating their students in contemplative forms of knowledge primarily.

11 Newman says, "Just as in morals, honesty is the best policy, as being profitable in a secular aspect, though such profit is not the measure of its worth, so too as regards what may be called the virtues of the Intellect, their very possession indeed is a substantial good, and is enough, yet still that substance has a shadow, inseparable from it, viz., its social and political usefulness." Newman, *Idea*, 180.

12 Newman, "Intellect, the Instrument of Religious Training," *Sermons*

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Paradoxically, it is the university's aiming at the cultivation of reason that gives it its great power. Moreover, to focus on forming the student's minds is not to neglect their moral and spiritual formation, but to help ground it in a "masculine religion" suitable to their years.

Second: The Purpose of the University Is to Teach

A second aspect of Newman's definition of a university is that the function of a university is to teach rather than to discover. The author of *Development of Christian Doctrine* did not consider the university to be devoted to development or discovery, but rather to passing on wisdom. This is not to condemn research; new discoveries may well be the project of scientific societies or literary academies.¹³ All the same, it is not the business of the university.

By defining the university as a place of teaching as distinct from discovery, Newman implies that the university should assume a collective body of knowledge that can be passed on. It is clear enough that the body of knowledge that Newman held the university should assume is the perennial philosophy of Western Civilization, broadly considered, sometimes called the wisdom of the ages.¹⁴ Nonetheless, given that the university was to aim

Preached on Various Occasions (Notre Dame: University of Notre Dame Press, 2007), 14. The sermon is one of eight preached to the Catholic University of Ireland in 1856 and 1857.

¹³ Newman saw discovery and research as the role of the "Academies" such as London's Royal Academy (1660) and Paris's Académie des sciences (1666). He notes, "To discover and to teach are distinct functions; they are also distinct gifts and are not commonly found united in the same person. He, too, who spends his day in dispensing his existing knowledge to all comers is unlikely to have either leisure or energy to acquire new." Newman, *Idea*, xiii. See also Newman's quotation of Cardinal Gerdil on the same page.

¹⁴ On this note, one might consider Newman's comments on the "luminous" character of the West's common civilization; Newman, *Idea*, 251–52. Newman goes so far as to call the civilization that originated out of "the countries

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at passing on the knowledge “especially called Philosophy,” it is appropriate to consider the philosopher Newman primarily had in mind,

Do not suppose, that in thus appealing to the ancients, I am throwing back the world two thousand years, and fettering Philosophy with the reasonings of paganism. While the world lasts, will Aristotle's doctrine on these matters last, for he is the oracle of nature and of truth. While we are men, we cannot help, to a great extent, being Aristotelians, for the great Master does but analyze the thoughts, feelings, views, and opinions of human kind. He has told us the meaning of our own words and ideas, before we were born. In many subject-matters, to think correctly, is to think like Aristotle; and we are his disciples whether we will or no, though we may not know it.¹⁵

To rely on the minds of the past also allows the university to venture beyond the intellectual capacity of its current students and teachers. Why would the university not desire the best? As in ancient Greece, men still reason with syllogisms. Modern calculus demonstrates using the definition as a middle term just as Euclid did in his geometry. Bodily motion in the twenty-first century requires an underlying subject of the motion just as much as it did in the fourth century B.C. In time, act is as prior to potency as it was before time itself. The doctrines of Aristotle remain permanently relevant.

Of course, teaching of the kind that would render an intellect beautiful in the way Newman has described it is more easily articulated than accomplished. Attaining the good of the mind

which surround the Mediterranean Sea as a whole” the “the Intellect and the Mind of the Human Kind.” For a general account of the perennial Philosophy, see John Francis Nieto, “Misology: The Hatred of Argument and the Life of the Intellect,” *The Aquinas Review* 9 (2002): 1–29.

¹⁵ Newman, *Idea*, 109–10.

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is no easy task; man is in many ways in bondage.¹⁶ Like Aristotle before him, Newman recognizes that the mind of fallen man is prone to error.¹⁷ That said, the case is not wholly desperate. Newman was aware of Aristotle's famous paradox regarding man's relation to truth:

the contemplation of truth is in one way difficult, but in another way easy. A sign of this is that although no one can touch on it worthily, neither can anyone miss the mark altogether; every person is able to say something about nature. And though each person adds nothing or a little to [the truth], something great arises.¹⁸

Human collaboration allows man to extend the reach of his fallen nature. As products of man's reason, the sciences and arts must develop over time. Every discipline is perfected over several generations.¹⁹ For disciplines to develop, men must collaborate with the preceding generations and transmit what they have understood to the next, thus forming an intellectual tradition. Aquinas says,

¹⁶ See Aristotle, *Metaphysics* 1.1, 982b28; *On the Soul* 3.3, 427a29–b2.

¹⁷ Newman says, "I have no intention at all of denying, that truth is the real object of our reason, and that, if it does not attain to truth, either the premise or the process is in fault; but I am not speaking here of right reason, but of reason as it acts in fact and concretely in fallen man. . . [I]ts tendency is towards a simple unbelief in matters of religion." Newman, *Apologia Pro Vita Sua* (Mineola, NY: Dover Publications, 2005), 158.

¹⁸ Aristotle, *Metaphysics* 2.1, 993a30–b1; translation my own. For more thorough consideration of this passage, see Duane Berquist, "A Note for the Second Book of Wisdom," *The Society for Aristotelian-Thomistic Studies*, https://society-aristotle-aquinas.org/files/3114/2678/3489/02-Note_for_Reading_One.pdf. See also Aristotle, *Eudemian Ethics* 1.6, 1216b26–35.

¹⁹ One noted exception to this rule may be the subject of logic. Aristotle boasts that unlike the subject of rhetoric and the practical arts, he developed and completed logic without relying on the work of previous generations. See *Sophistical Refutations* 2.34, 183a37–4b8.

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Man has a natural knowledge of the things which are essential for his life only in a general fashion, since he can attain knowledge of the particular things necessary for human life by reasoning from natural principles. But it is not possible for one man to arrive at a knowledge of all these things by his own individual reason. It is therefore necessary for man to live in a multitude so that each one may assist his fellows, and different men may be occupied in seeking, by their reason, to make different discoveries—one, for example, in medicine, one in this and another in that.²⁰

The exigencies of life make it nearly impossible for man to acquire knowledge on his own; he must eat, sleep, provide shelter and clothing for himself, rear offspring, maintain his health and tools, develop skills, protect his goods, and avoid violent death—so much for a balanced life. A polis allows man a comfortable existence, a civilization maintained over successive generations, wisdom. Einstein depended on Newton, who depended on Galileo, who depended on Copernicus, Ptolemy, and Archimedes, who depended on Euclid, who depended on Thales, who learned to speak Greek from his father.

Just as the process of discovery ought to be carried out within a tradition, so should intellectual formation. Because God has endowed man with speech, we are able to communicate our discoveries. Accordingly, those who come to know can teach those who do not. Man is intellectually social by nature. In general, Newman considered the attempt to be a self-made-man imbecility: “to be self-taught is a misfortune . . . for in most cases, to be self-taught is to be badly grounded, to be slovenly finished, and to be preposterously conceited.”²¹ A student is

²⁰ Thomas Aquinas, *De Regno* 1.1, n. 6, trans. Phelan, rev. by I. Th. Eschmann (Toronto: The Pontifical Institute of Mediaeval Studies, 1949).

²¹ Newman, *Idea*, 329.

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unable to determine for himself whether he has mastered a doctrine and lacks “jealous scrutiny into his power of expressing himself and of turning his knowledge to account.”²² He must learn how to learn.²³ It is common to consider intellectual tradition as an ongoing conversation among thinkers throughout human history. Despite what other difficulties the notion of a “great conversation” between generations may have, it has one virtue. To learn, to discover, to think while assuming an intellectual tradition of the past is not to go backward, as if retracing some ground that has already been covered; it is to be human.

Now, for Newman, intellectual formation is best when it is Catholic—when it assumes the Catholic intellectual tradition. To see this, we turn to the third aspect of his definition—that the university’s goal is universal knowledge.

Third: The Aim of the University Is Universal Knowledge

In Aristotle’s introduction to his treatise on natural history, *The Parts of Animals*, he frames his inquiry into nature as part of a larger endeavor to become a “man of universal education.” He states,

We only ascribe universal education to one who in his own individual person can judge nearly all branches of knowledge and not to one who has a like ability merely in some special subject.²⁴

While no man can claim perfect expertise in every discipline, a man educated in a unqualified sense can form an adequate off-hand judgment in any discussion and acquire knowledge with

²² Newman, *Historical Sketches*, vol. III (London: Longmans, Green, and Co., 1909), 190.

²³ See Newman, *Sketches*, 214–15.

²⁴ Aristotle, *Parts of Animals* 1.1, 639a9–11; trans. Ogle (Victoria: Leopold Classical Library, 2016).

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ease and proficiency.²⁵ Although Aristotle is best known for having his head in the rarified air of metaphysics, the man began each morning learning mathematical proofs and spent considerable time cataloging such things as the skeletal structure of a crawfish.²⁶ A well-rounded education gives us a foundation that enables us to pick up and learn different disciplines according to their own methods and principles.

The third and final aspect of Newman's definition of the university is that a university provides universal education. To be educated in an unqualified sense, that is, to have the sort of judgment Aristotle describes, requires a knowledge of many disciplines. Since the university is ordered to the perfection of the student's mind, it must provide the general education that a cultivated mind requires. Specialization has its benefits, but it does not benefit the one who is specialized:

There can be no doubt that every art is improved by confining the professor of it to that single study. But, although the art itself is advanced by this concentration of mind in its service, the individual who is confined to it goes back.²⁷

To specialize is to narrow the mind. Aristotle notes that men take in what they hear according to their custom. Some men will not accept anything unless it is presented mathematically; others unless one gives multiple examples; others unless one quotes the authority of a poet.²⁸ Newman notes that the physicist, whose

25 See Newman's claim that a "trained and formed" intellect is a "faculty of entering with comparative ease into any subject of thought, and of taking up with aptitude any science or profession." *Idea*, xvii–iii.

26 Aristotle, *History of Animals* 4.17, 549a15–b26. For a delightful account of Aristotle as a naturalist, see Armand Marie Leroi's *The Lagoon: How Aristotle Invented Science* (New York: Penguin Books, 2014).

27 Newman, *Idea*, 168.

28 Aristotle, *Metaphysics* 2.3, 994b32–95a20. See also Aristotle, *Eudemian*

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a primary logical instrument is induction, will be disposed to reject theology, whose primary instrument is deduction.²⁹ To acquire a universal education, students need the experience of 1) taking in hand many subject matters, 2) resolving to different principles which are seen in separate lights, 3) reasoning with varying forms of argument, and 4) concluding with differing degrees of certitude. Only with such experience should anyone consider beginning first philosophy—to say nothing of the knowledge that the latter presupposes!

Moreover, all sciences, insofar as they are sciences, abstract. They consider one aspect of reality apart from the conditions that aspect has or may have in its concrete reality. The excellence of the mind, however, requires some knowledge of the whole. A wise man, as Aristotle says, “knows all things.”³⁰ For the mind to attain its excellence, it must know reality as a whole in the way that it is able, whereas reality in itself is a unified whole: “the universe,” Newman says, “is so intimately knit together, that we cannot separate off portion from portion, and operation from operation, except by a mental abstraction.”³¹ Accordingly, any specialization in a singular discipline to the detriment of viewing the whole goes against the nature of a university.

All the branches of knowledge are connected directly or indirectly. One science will have implications for another. Optics will affect astronomy, as will geometry and arithmetic. Science has changed many a man’s philosophy and vice versa. Familiarity with several disciplines gives one the experience of the sciences’ implications for one another and the limits of these implications.³² Consequently, the sciences demand comparison

Ethics 1.6, 1217a1–17.

²⁹ Newman, *Idea*, 441.

³⁰ Aristotle, *Metaphysics* 1.2 982a4–10.

³¹ Newman, *Idea*, 50.

³² See, for instance, Newman’s account of how the conclusions of physics have some role to play in natural theology, but the theologian should have no fear

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and adjustment. "They complete, correct, and balance"³³ one another. Newman calls the "philosophical contemplation" of the whole of reality through a balanced application of various disciplines "true enlargement of mind."³⁴

Who would deny that such a knowledge is a thing to be desired in itself? What is required, here, is not simply knowledge of several disciplines. Shallow generalization is no virtue. A developed mind will see how they are connected, ranked, and limited. "To give undue prominence to one is unjust to another."³⁵ To ignore one encourages another to venture into fields beyond its own grasp.³⁶

that their implications will need to be adjusted as physics progresses given the limited scope of their implications. He says, "Natural Theology, then, is not a progressive science. That knowledge of our origin and of our destiny which we derive from Revelation is indeed of very different clearness, and of very different importance. But neither is Revealed Religion of the nature of a progressive science. . . In divinity there cannot be a progress analogous to that which is constantly taking place in pharmacy, geology, and navigation . . . You see, Gentlemen, if you trust the judgment of a sagacious mind, deeply read in history, Catholic Theology has nothing to fear from the progress of Physical Science, even independently of the divinity of its doctrines. It speaks of things supernatural; and these, by the very force of the words, research into nature cannot touch." Newman, *Idea*, 428–38.

33 Newman, *Idea*, 99.

34 Newman, *Idea*, 136–37, 179: "That only is true enlargement of mind which is the power of viewing many things at once as one whole, of referring them severally to their true place in the universal system, of understanding their respective values, and determining their mutual dependence."

35 Newman, *Idea*, 100.

36 Newman, *Idea*, 78. Newman may have in mind Isaac Newton's *Principia* as an example which, after dismissing "substantial forms" and "occult qualities" from philosophy, reduces its method to discovering the underlying forces of nature from the phenomena of motion and, from these forces, predicting the remaining phenomena; see *Principia*, xvii–xviii. "All philosophy," Newton says, "is grounded in the extension, hardness, impenetrability, mobility, and force of inertia of the smallest material particles." *Principia*, 399. Newton then infers the existence of God based on the beauty of the solar system and the lack of "mechanical causes" in the origin of planetary orbits; *Principia*, 544. All this in

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What discipline do we use to evaluate and order the knowledge of the other disciplines? The answer lies in Newman's understanding of the unity in reality. "The subject-matter of knowledge," he says, "is intimately united in itself, as being the acts and works of the creator."³⁷ Newman explains,

[God] of course in His own Being is infinitely separate from [the universe], and Theology has its departments towards which human knowledge has no relations, yet He has so implicated Himself with it, and taken it into His very bosom, by His presence in it, His providence over it, His impressions upon it, and His influences through it, that we cannot truly or fully contemplate it without in some main aspects contemplating Him.³⁸

To see the order and value of the various disciplines, we must have a God's-eye view. We understand a thing by knowing its principles, but the ultimate principles of anything can only be found in its origin or end. Thus, to have a holistic—a universal—understanding of the cosmos requires an understanding of the origin or end of the cosmos. Moreover, only a discipline with such a broad perspective could have the purview to determine the order and use of the various other disciplines in the workshop of wisdom. In allusion to the first chapter of Aristotle's *Nicomachean Ethics*, Newman notes that the bridle-maker has no knowledge of the science of war.³⁹ Only the higher form of knowing can distinguish and order the scope of the lower knowledge. Only reason can distinguish itself from imagination and sense, and reason considers these faculties' order to reason. The

a treatise on mathematical physics! Isaac Newton, *Mathematical Principles of Natural Philosophy*, trans. Florian Cajori (Berkeley, CA: University of California Press, 1946).

³⁷ Newman, *Idea*, 99.

³⁸ Newman, *Idea*, 51.

³⁹ See Newman *Idea*, 47 and Aristotle, *Nicomachean Ethics* 1.1, 1094a7–17.

political philosopher can distinguish political philosophy from rhetoric and explain the statesman's use of rhetoric. Aristotle distinguishes math from natural philosophy in his *Physics*,⁴⁰ but he delays distinguishing second philosophy from first philosophy until the *Metaphysics*.⁴¹ Aquinas distinguishes theology proper from first philosophy in his *Summa Theologiae*.⁴² Since the lower sciences are ordered to the higher sciences,⁴³ it is in

40 Aristotle, *Physics* 1.2, 193b22–194a15.

41 Aristotle, *Metaphysics* 6.1, 1025b3–1026a 32.

42 See Thomas Aquinas, *Summa Theologiae* I, q. 1, as. 5–6.

43 Although my interpretation of Newman as viewing the lower sciences as having an order to theology is prevalent, it is not universal. See John Goyette, "Augustine versus Newman on the Relation between Sacred and Secular Science," *Faith, Scholarship and Culture in the 21st Century*, edited by Alice Ramos and Marie I. George (American Maritain Association Publications, distributed by The Catholic University of America Press, 2002), 202–18 and Goyette and William Mathie, "The Idea of a Catholic University," *Maritain Studies* 16 (2000): 71–91. Goyette claims that Newman "rejects the notion that the secular sciences should be pursued for the sake of theology." Goyette, "Augustine versus Newman," 211. While Goyette notes Newman's claim that theology is the highest science, he cites Newman's repeated use of the phrase "circle of sciences," and his claim that literature and the physical sciences have a "tendency" to be hostile to theology in Discourse IX. Goyette, "Augustine versus Newman," 211–15. I will not enter a thorough discussion of the problem here. One might note, however, that even within Discourse IX, Newman says that the tendency is "not rightful or necessary" and he says further: "Truth has two attributes—beauty and power; and while Useful Knowledge is the possession of truth as powerful, Liberal Knowledge is the apprehension of it as beautiful. Pursue it, either as beauty or as power, to its furthest extent and its true limit, and you are led by either road to the Eternal and Infinite, to the intimations of conscience and the announcements of the Church." Newman, *Idea*, 217. While Newman sees purpose in the study of the other liberal disciplines apart from their use for theology, he also recognizes their good, when properly understood, in leading to theological truth. Moreover, he claims theology is the branch of knowledge with "supreme influence." Newman, *Idea*, 69. He says, "Religious Truth is *not* only a portion, but a condition of general knowledge. To blot it out is nothing short . . . of unravelling the web of University Teaching. It is, according to the Greek proverb, to take the *Spring from out of the year*, it is to imitate the preposterous proceeding of those tragedians who represented

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light of the higher sciences that they attain their greatest dignity, and in that light the distinctions among the sciences become visible.⁴⁴ Simply put, theology—the science of God— is what gives a universal education its unity and order.

We might say that it was obvious to Newman that the faith should have a direct bearing on one's intellectual formation. The act of faith was, in Newman's view, something intellectual. Newman had spent the better part of fifty years battling Liberalism in religion.

Liberalism in religion is the doctrine that there is no positive truth in religion, but that one creed is as good as another, and this is the teaching which is gaining substance and force daily. It is inconsistent with any recognition of any revealed religion as true. It teaches that all are to be tolerated, for all are matters of opinion. Revealed religion is not a truth, but a sentiment and a taste; not an objective fact, not miraculous; and it is the right of each individual to make it say just what strikes his fancy.⁴⁵

The doctrine of religious Liberalism is that one's religion is determined by possessing a proper sentiment, such as possessing good feeling toward one's fellow man. Holding certain things to be true and others false has no bearing on one's religion. Newman, in contrast, espoused an antiquated Catholic notion:

a drama with the omission of its *principal part*." Newman, *Idea*, 70, emphases added. For a reading like my own, see I. T. Ker, Editor's Introduction, in John Henry Newman's *The Idea of a University* (Oxford: Clarendon Press, 1873), lxi–lxii. See also David Brian Warner, *John Henry Newman's Idea of a Catholic Academy* [Unpublished Dissertation] (University of Oxford, 2001) 148–55. See also Michael Tierney, "Newman's Doctrine of University Education," *Studies: An Irish Quarterly Review*, 42 (1953): 123–24.

⁴⁴ See Newman, *Idea*, 90–91.

⁴⁵ Newman, "Biglietto Speech," *Logos* 6.4 (2003): 170–71. Newman's "Biglietto Speech" is his impromptu address delivered on May 12, 1879, upon learning that the Pope Leo XIII had named him Cardinal that morning in a secret consistory.

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The religious world, as it is styled, holds, generally speaking, that religion consists, not in knowledge, but in feeling or sentiment. The old Catholic notion, which still lingers in the Established Church, was that Faith was an intellectual act, its object truth, and its result knowledge.⁴⁶

According to Newman, the more we are prone to the liberal view that one's religion is determined by having a certain sentiment or taste, the more likely we are to think that faith does not have a bearing on one's intellectual wellbeing. If faith is not an act of the mind, then the mind can attain its proper good—truth—without the correct faith, and a person with the correct faith is in no way aided by his faith to attain the proper good of his mind.

When the university assumes the intellectual tradition that it will teach, it must assume the Catholic intellectual tradition, which has been guided for generations under the light of faith. Newman normally emphasizes that a bad intellectual culture can dispose one to deny the truth of the faith. “[I]ntellectual culture, which is so exalted in itself,” Newman says, “not only has a bearing upon social and active duties, but upon Religion also.”⁴⁷ A man must be thoroughly grounded to “withstand and baffle the fierce energy of passion and the all-corroding, all-dissolving skepticism of the intellect in religious inquiries.”⁴⁸ Our intellectual culture has a constant influence on what we think. To be able to attain wisdom, our mind needs a custom that is ordered to the truth.⁴⁹ When the custom is pernicious, our

⁴⁶ Newman, *Idea*, 27–28. Newman goes on to say, “in proportion as the Lutheran leaven spread, it became fashionable to say that Faith was, not an acceptance of revealed doctrine, not an act of the intellect, but a feeling, an emotion, an affection, an appetency; and, as this view of Faith obtained, so was the connexion of Faith with Truth and Knowledge more and more either forgotten or denied.”

⁴⁷ Newman, *Idea*, 181.

⁴⁸ Newman, *Apologia*, 158.

⁴⁹ For a more thorough consideration of the role of intellectual custom

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minds wander from a young age. When the intellectual culture is grounded in the truth, the mind may hope to attain wisdom. A culture of faith stabilizes the mind, helps it trust that a satisfactory answer can be given, and thereby encourages the mind to entertain questions in their proper order. The faith has also given us its teachers. Newman says,

Catholic inquiry has taken certain definite shapes, and has thrown itself into the form of a science, with a method and a phraseology of its own, under the intellectual handling of great minds, such as St. Athanasius, St. Augustine, and St. Thomas; and I feel no temptation at all to break in pieces the great legacy of thought thus committed to us for these latter days.⁵⁰

If the university is to aim at wisdom, theological and philosophical, it is expedient to learn from those whom the Church holds up as teachers. Following these guides would determine not only the content of the theology and philosophy that the university teaches, but its “method,” “phraseology,” and “shape.”⁵¹

According to Newman, “Religious truth is not only a portion, but a condition of general knowledge. To blot it out

in inquiry, see Ronald McArthur, “Intellectual Custom and the Study of St. Thomas,” *The Aquinas Review* 20 (2015): 1–24.

⁵⁰ Newman, *Apologia*, 163.

⁵¹ Christopher Blum notes that it is difficult to determine, from Newman’s *Idea of a University* or his *Historical Sketches* on the university, the content, pedagogy, or order of formation that Newman thought would produce “the intellect that has been disciplined to the perfection of its powers.” Christopher O. Blum, “The Promise of Newman’s Collegiate Ideal,” *Logos* 16.4 (2013): 92–93. Blum reasonably observes that Newman’s claim concerning “Catholic inquiry” reveals in a general way the content of revealed theology. It also implies something regarding the order of the other disciplines. For instance, following Thomas Aquinas as a guide seems to imply the order of distinct philosophical disciplines leading to divine science. See Aquinas, *In Librum de Causis Expositio*, Prooemium, ns. 7–8; *In Decem Libros Ethicorum Aristotelis Ad Nicomachum Expositio*, Bk. 6, lec 7, ns. 1209–1211.

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is nothing short, if I may so speak, of unravelling the web of University Teaching.”⁵² The Church is necessary for the university:⁵³

[P]ractically speaking, [the university] cannot fulfil its object duly, such as I have described it, without the Church's assistance; or, to use the theological term, the Church is necessary for its integrity. Not that its main characters are changed by this incorporation: it still has the office of intellectual education; but the Church steadies it in the performance of that office.⁵⁴

The human sciences must be left to use their own principles and methods. It is proper to modern experimental science to proceed inductively. It is proper to philosophy to be based on man's natural lights. What is proper to theology is that it proceeds on the basis of revealed truth, that is, on the basis of the faith. As the tradition and the magisterium of the Church guard the faith, so they guard the foundations of theology, and the foundations of the university.

52 Newman, *Idea*, 70.

53 While I have argued that Church's influence through Catholic theology is necessary for the university's integrity, my argument does not imply that such a role for the Church is sufficient in the university. John Goyette and William Mathie have claimed that in Cardinal Newman's final analysis the Church must also “encourage a sense of the miraculous and mysterious” in the university especially through the mass. They cite Robert Sokolowski who “argued that the virtual collapse of Catholic universities which has taken place in the last thirty years is partly due to the change in the Mass since the Second Vatican Council.” See Goyette and Mathie, “The Idea of a Catholic University,” 90–93; Robert Sokolowski, “Church Tradition and the Catholic University,” *Proceedings of the Eighteenth Convention of the Fellowship of Catholic Scholars* (1995): 75–84.

54 Newman, *Idea*, ix.

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Conclusion

Newman's tenure in Ireland proved short-lived. Newman and the Archbishop were in constant disagreement. Moreover, Catholics remained more comfortable sending their children to the more established Trinity College, despite its professed Anglicanism. So, on November 12, 1858—exasperated by the bishops and especially by Archbishop Cullen—Newman resigned as rector of the Catholic University of Ireland and returned to England. The University never had more than about a hundred students.

Other Catholic universities, founded around the same time, are today household names: Louvain, Laval, Notre Dame. They are beautiful places with rich histories. Each at some time has rendered great service to the Church. As a place of education, Newman's Catholic university shuttered its door within 20 years of its opening, but as an idea, it endures today. And unlike other universities, it remains the same today as it did in 1851, successfully serving its original purpose: to teach students, teachers, and the Church the true purpose of education and the Church's role in it.

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UNIVERSAL PREDICATES AND UNIVERSAL CAUSES

Edmund Waldstein, O.Cist.

Prooemium

I have long admired St. John's College from afar, and so it is truly an honor for me to lecture here. These past two days I have had the privilege of sitting in on some classes—a wonderful experience. St. John's has always been an object of fascination to graduates of other “great books” colleges, including to my own *alma mater*, Thomas Aquinas College, whose curriculum is largely modeled on St. John's. Indeed, in my day, we even used some of the old photo-copied, spiral-bound manuals from St. John's for lab and music. The quip at Thomas Aquinas College used to be, “I go to TAC—we use the great manuals program.”

Far more than the great manuals, or even the great books themselves, however, what St. John's has modeled for other great books colleges is the Socratic desire for wisdom, and the Socratic attempt to seek for wisdom through conversation or dialectic, *dia-logou*, through speech. Certainly, there are different modes in which this search can be carried on. Both Plato's dialogues and Aristotle's treatises can be seen as carrying on the

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Socratic search. If St. John's is associated with a mode like that of the Platonic dialogues that use questioning and *aporia* and irony to "de-sedimentize" the clichés of our language, Thomas Aquinas College is associated with a mode more like that of the Aristotelian treatises with their patient attention to common conceptions, and their painstaking, almost pedantic, syllogistic unfolding of what is implicit in such conceptions. St. John's is, as Eva Brann has pointed out, "radically nondogmatic."

It embodies no teaching of substance but only pedagogic hypotheses, which, though they undeniably and I think unavoidably embody what might be called biases of attention, nevertheless deliver no dogma of any sort concerning the chosen learning matter.¹

Thomas Aquinas College, on the other hand, is intentionally dogmatic—both in the sense of taking a definite position concerning the answers to the fundamental questions raised by the great books, and in the sense of accepting Divine Revelation, and therefore of uniting the pursuit of human wisdom in philosophy to the pursuit of divine wisdom in theology. In this lecture, however, I do not want to focus on that difference. Rather, I want to reflect a little on what exactly it is that we seek when we seek wisdom through speech.

1. Philosophy as the Path to the Universal

In the Platonic dialogues, the search for wisdom is often described as beginning with a question about what something is. What is virtue? What is justice? The question is answered by seeing that the thing in question belongs to a more universal kind. But that more universal kind is itself comprehended by an *even more universal* kind. Thus, the path of philosophy is a path that

¹ Eva Brann, "A Call to Thought: Pope John Paul II's *Fides et Ratio*," in *The St. John's Review* 45.1 (1999): 109–118, at 110.

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ascends towards ever greater universality. Wisdom would seem to consist in finding the most universal of all kinds or forms.

In a lecture entitled “On Precision,” delivered many years ago here at St. John’s, Jacob Klein described the path of ascending universality as follows:

In order to grasp what something is, we have to allocate it to a family of things quasi-known to us, and then to allocate this family of things, this genus, to another larger family, also quasi-known to us, and to keep on ascending. Only when and if the last step has been made, can we say that we have found out what the unknown thing, that X which started us off on this journey, is, can we say that we know what it is. It is this last step that illuminates—sun-like—not only all the intermediary genera, but the very thing, the what of which we wanted to know.²

The expression “sun-like” used by Klein in this passage is clearly a reference to Book VII of Plato’s *Republic* (which, I have been told, the freshmen will be discussing on Monday), the famous allegory of the cave. In the allegory, Socrates describes someone emerging from a cave, where he and others have been imprisoned, there seeing only shadows of statues projected by the light of a fire onto a screen. Emerging from the cave, this person sees the sun.³ The sun stands for the *idea* or *form* of the good (ἀγαθοῦ ἰδέα), which “provides truth and intelligence” in the intelligible realm.⁴

Already in Book VI, Socrates has argued that the form of the good is both a universal idea, after which other things are called good, and at the same time a universal cause. This first point has to do with the fact that the word “good” is said of, predicated of, many things:

² Jacob Klein, “On Precision,” in *Lectures and Essays* (Annapolis: St. John’s College Press, 1985), 297.

³ See Plato, *Republic* VII, 514a–517a.

⁴ *Ibid.*, 517c.

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We both assert that there are . . . and distinguish in speech, many fair things, many good things, and so on for each kind of thing. . . . And we also assert that there is a fair itself, a good itself, and so on for all the things that we then set down as many. Now, again, we refer them to one idea of each as though the idea were one; and we address it as that which really is. . . . And, moreover, we say that the former are seen but not intellected, while the ideas are intellected but not seen.⁵

In other words, “good” is a universal predicate said of all good things. Moreover, this universal predicate, this idea or form, is more real than the things of which it is said.

The second point is that this form of the good is not only a predicate, said of the many, but also a cause. It is a cause of our knowing intelligible things (just as the sun is the cause of our seeing visible things):

What provides the truth to the things known and gives the power to the one who knows, is the idea of the good [ἀγαθοῦ ιδέαν]. And, as the cause of the knowledge and truth, you can understand it to be a thing known; but, as fair as these two are—knowledge and truth—if you believe that it is something different from them and still fairer than they, your belief will be right.⁶

Moreover, it is also the cause of the coming to be of those things (just as the sun causes the seasonal generation of living things):

I suppose you’ll say the sun not only provides what is seen with the power of being seen, but also with generation, growth, and nourishment although it itself isn’t generation. . . . Therefore, say that not only being known

⁵ Plato, *Republic* VI, 507b; trans. Alan Bloom, 2nd ed. (New York: Basic Books, 1991).

⁶ Plato, *Republic* VI, 508e–509a.

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is present in the things known as a consequence of the good, but also existence and being are in them besides as a result of it, although the good isn't being but is still beyond being, exceeding it in dignity and power.⁷

This universal cause of intelligibility is therefore also the universal cause of being. As Klein notes, it must be “something that does not lack anything, that is self-sufficient, complete,—perfect.”⁸ Glaucon calls it “ἀμήχανον κάλλος,” overwhelming, or unmanageable beauty.⁹ The philosopher searches with passionate desire for the knowledge of this universal form.

2. A Difficulty: The Universal as Vague and Confused

But here a difficulty arises. Is it true that what is most universal is also what is most causal, most perfect, and most illuminating? Could one not say, on the contrary, that the most universal is what is most abstract, and therefore powerless, vague, imprecise, and imperfect? If we see a figure approaching us in the dark, and you ask me: “What is that?” If I answer, “A being.” I have named it by something *very* universal. But this very universality under which I have comprehended it means that I have said very little of interest about the thing in question. *Of course* it is a being. But what kind of being? Is it alive? Is it safe? Is it a human being or a bear or a gorilla or a vampire? I have not indicated anything about that.

A somewhat similar objection was raised by the German sociologist Max Weber in a 1917 lecture entitled “Science as a Vocation.” In that lecture Weber summarizes the allegory of the

⁷ Plato, *Republic* VI, 509b.

⁸ Klein, “On Precision,” 297.

⁹ Plato, *Republic* VI, 500a. The translation “unmanageable” is suggested by Michael Waldstein, *Glory of the Logos in the Flesh* (Ave Maria: Sapientia Press, 2021), Part I, ch. 5: “The Nature of Logos in Plato’s *Republic*.” This paper owes much to this treatment of the *Republic* in that chapter.

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cave, which he sees as an allegory for the discovery of the scientific *concept* (*Begriff*), which seemingly enables us to grasp eternal truths:

Plato's passionate enthusiasm in the *Republic* is ultimately to be explained by the fact that for the first time the meaning of the *concept* had been consciously discovered, one of the greatest tools of all scientific knowledge. It was Socrates who discovered its implications. He was not alone in this respect. You can find very similar approaches in India to the kind of logic developed by Aristotle. But nowhere was its significance demonstrated with this degree of consciousness. In Greece for the first time there appeared a tool with which you could clamp someone into a logical vise so that he could not escape without admitting either that he knew nothing or that this and nothing else was the truth, the eternal truth that would never fade like the actions of the blind men in the cave.¹⁰

But Weber dismisses this enthusiasm as something that no one today could feel:

Well, who regards science in this light today? Nowadays, the general feeling, particularly among young people, is the opposite, if anything. The ideas of science appear to be an otherworldly realm of artificial abstractions that strive to capture the blood and sap of real life in their scrawny hands without ever managing to do so. Here in life, however, in what Plato calls the shadow theater on the walls of the cave, we feel the pulse of authentic reality; in science we have derivative, lifeless will-o'-the-wisps and nothing else.¹¹

¹⁰ Max Weber, "Science as a Vocation," in *The Vocation Lectures*, trans. Rodney Livingstone (Indianapolis: Hackett, 2004), 14.

¹¹ Ibid.

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Weber agrees, at least to some extent, with the general feeling that he describes; he thinks that science as a path to the truth of being is an illusion that has been shattered.¹²

Is Weber right? Is the ascent to the most universal form nothing more than the thinking of an empty abstraction? Was Socrates on the wrong path?

3. Two Kinds of Universal

A helpful distinction in thinking through these questions is a distinction between two kinds of universal: universal predicates and universal causes. As we saw, Plato's Socrates presents these two kinds of universal as coinciding: the most universal predicate is also the most universal cause. But Aristotle tends to keep them separate. St. Thomas Aquinas, the thirteenth century scholastic theologian and commentator on Aristotle, points this out in considering an apparent tension between two texts of Aristotle. Let us look at each of the texts from Aristotle in turn, before considering the distinction that Thomas invokes to resolve their tension. The first text is from the beginning of the *Physics*, Aristotle's great work on nature:

The natural path is to go from the things which are more known and certain to us toward things which are more certain and more knowable by nature. For the more known to us and the simply knowable are not the same. Whence, it is necessary to proceed in this way, from what is less certain by nature but more certain to us toward what is more certain and more knowable by nature. But the things which are first obvious and certain to us are rather confused, and from these, the elements and principles become known later by dividing them. Whence, it is necessary to go from the universal to the particulars.

¹² *Ibid.*, 17.

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For the whole is more known according to sensation, and the universal is a certain whole. For the universal embraces many things within it as parts.¹³

When we sense things, we first have a vague impression of the whole, before distinguishing the parts. For example, in tasting wine we first have a vague impression of its overall taste, but in savoring it we can begin to distinguish the various flavors it contains. In a similar way, Aristotle is claiming, we know things first in a universal but vague way, and then we have to tease out what is latent in that confused knowledge. Aristotle seems here to be supporting the objection that I raised. What is more universal is vague and confused, so the path of philosophy, at least of natural philosophy, is not to ascend to the more universal, but rather to *descend* to the more particular.

The second text is taken from the first book of Aristotle's *Metaphysics*. Aristotle is discussing the characteristics of the wise man, one of which is that the wise man is held to be someone who knows everything:

[The] knowing of all things must belong to the one who has most of all the universal knowledge, since he knows in a certain way all the things that come under it; and these are just about the most difficult things for human beings to know, those that are most universal, since they are farthest away from the senses.¹⁴

There seems to be a tension between these two texts. In the first Aristotle is claiming that the more universal is more known to us, easier for us to know; in the second he is saying that the universal is less known to us, more difficult for us to know. In commenting

¹³ Aristotle, *Physics* 1.1, 184a16–26, trans. Glen Coughlin (South Bend: St. Augustine Press, 2005).

¹⁴ Aristotle, *Metaphysics* 1.2, 982a21–25, trans. Joe Sachs (Santa Fe: Green Lion Press, 1999).

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on this apparent contradiction, St. Thomas Aquinas draws a distinction between universal predicates and universal causes:

[T]hose things which are more universal according to simple apprehension are known first; for being is the first thing that comes into the intellect, as Avicenna says, and animal comes into the intellect before man does. For just as in the order of nature, which proceeds from potentiality to actuality, animal is prior to man, so too in the genesis of knowledge the intellect conceives animal before it conceives man. But with respect to the investigations of natural properties and causes, less universal things are known first, because we discover universal causes by means of the particular causes which belong to one genus or species. Now, those things which are universal in causing [*universalia in causando*] are known subsequently by us (notwithstanding the fact that they are things which are primarily knowable according to their nature), although things which are universal by predication [*universalia per praedicationem*] are known to us in some way before the less universal (notwithstanding the fact that they are not known prior to singular things).¹⁵

In other words, there are two kinds of universals: universal

¹⁵ St. Thomas Aquinas, *In duodecim libros Metaphysicorum Aristotelis expositio*, Bk. 1, lec. 2, n. 46 [n. 11] (my own translation): “magis universalia secundum simplicem apprehensionem sunt primo nota, nam primo in intellectu cadit ens, ut Avicenna dicit, et prius in intellectu cadit animal quam homo. Sicut enim in esse naturae quod de potentia in actum procedit prius est animal quam homo, ita in generatione scientiae prius in intellectu concipitur animal quam homo. Sed quantum ad investigationem naturalium proprietatum et causarum, prius sunt nota minus communia; eo quod per causas particulares, quae sunt unius generis vel speciei, pervenimus in causas universales. Ea autem quae sunt universalia in causando, sunt posterius nota quo ad nos, licet sint prius nota secundum naturam, quamvis universalia per praedicationem sint aliquo modo prius quo ad nos nota quam minus universalia, licet non prius nota quam singularia.”

predicates, and universal causes. I want to consider each one in turn.

3.1 *Universal Predicates*

Universal predicates are names said of many different things, which have something in common. For example, the name “animal” is said of tigers, lions, horses, and so on, on account of something that is common to all of them. “Tiger” is said of many individual tigers, on account of their common tiger-nature. Little children quickly learn to recognize tigers and distinguish them from all other things. This is rather extraordinary. There seems to be a common inner form or nature of tigers, expressed in their appearance, that children, as it were, “recognize.” It can seem almost as though a child has already seen the form of a tiger in a previous life and is now recollecting it.

For the Socratic tradition, such universal predicates are not mere words that we apply to “classes” of things that happen to appear similar to us. Rather, they grasp something true about reality, a true common nature or essence that is *among* or *over* the many things.

But there are two different ways in which the Socratic tradition accounted for such universals. Recall that Socrates in *Republic* VI argues that the predication of the common name “good” for many good things, implies the existence of one true *idea* or *form* of the good. He makes a similar argument in *Republic* X, using different examples, to show that whenever one name is said of many, there is one true *form*, above the many. The many are mere imitations; the one idea or form is the true being:

Then let’s now set down any one of the “manys” you please; for example, if you wish, there are surely many couches and tables. . . . But as for ideas for these furnishings, there are presumably two, one of couch, one of table. . . . Aren’t we also accustomed to say that it is in looking to

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the idea of each implement that one craftsman makes the couches and another the chairs we use, and similarly for other things? For presumably none of the craftsmen fabricates the idea itself. How could he? . . . And what about the couchmaker? Weren't you just saying that he doesn't make the form, which is what we, of course, say is just a couch, but a certain couch? . . . Then, if he doesn't make what *is*, he wouldn't make the being but something that is like the being, but is not being. And if someone were to assert that the work of the producer of couches or of any other manual artisan is completely being, he would run the risk of saying what's not true.¹⁶

The true couch is the form or idea of a couch, which has not been made by human hands. It is separated from matter and motion, from the flux of becoming in this sensible world. The particular couches made by craftsmen are mere images and not true beings. As always in Plato, it is unclear to what extent he wants us to accept the conclusion of this argument as true.

Aristotle, at any rate, does not think this view of things was really taught by Socrates, but rather that it was invented by Socrates's students:

The opinion about the forms [or: ideas] came to those who spoke about them as a result of being persuaded by the Heracleitean writings that it is true that all perceptible things are always in flux, so that, if knowledge and thought are to be about anything, there must be, besides the perceptible things, some other enduring natures, since there can be no knowledge of things in flux. And then Socrates made it his business to be concerned with the moral virtues, and on account of them he first sought to define things in a universal way. . . . But Socrates did not make the universals or the definitions separate, while

¹⁶ Plato, *Republic X*, 596b–597a (italics in original).

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those who came next did, and called beings of this sort forms; so for them it followed by pretty much the same argument that there are forms of all things that are spoken of in a universal way.¹⁷

Aristotle thinks this teaching is false. In his *Metaphysics* he gives numerous arguments for rejecting it. Many of these reasons were already anticipated by Plato himself in the dialogue *Parmenides*. I want to briefly consider just one of these arguments. Aristotle writes:

But according to the necessities of the case and the opinions about the Forms, if they can be shared in, there must be Ideas of substances only. For they are not shared in incidentally, but each Form must be shared in as something not predicated of a subject.¹⁸

I take Aristotle to be building here on insights that he explains in his works of logic. Primary substances, that is, things which exist in their own right, are neither present in some other subject nor are they predicated (or said) of a subject.¹⁹ For example, “Socrates” is not *in* another subject the way his color is *in him*, but nor is “Socrates” predicated (or said) of anything else. We do not say “man is Socrates,” or “6 feet tall is Socrates,” or “Xanthippe is Socrates.” But, Aristotle seems to be arguing, the forms seem both to be primary substances (things in their own right not present in other things), but also to be predicated of the passing things of this world. For example, when we say “Socrates is a man” we seem to be predicating the form of man of Socrates himself. Aristotle does not think this really fits with how we use speech.

Aristotle takes a different route in explaining universal

¹⁷ Aristotle, *Metaphysics* 13.4, 1078b13–1079a32, trans. Sachs.

¹⁸ *Ibid.*, 1079a25–28, trans. W.D. Ross, 2nd ed. (Oxford: Clarendon Press, 1928).

¹⁹ See Aristotle, *Categories* 5, 2a11.

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predicates. For Aristotle, what is going on in universal predication is that our minds are abstracting the common nature from the many things among which it exists. In reality, the common nature exists within the natural things, but our minds can receive something of them without receiving everything. This is why we can have the idea of a material being, say a tiger, in our minds in an immaterial way. The universal predicate “tiger,” which we say of all individual tigers, is immaterial only because our minds have taken the intelligible form of tiger without the matter of individual tigers. This immaterial form exists in our minds as an “intention,” that is, as something that intends, points toward, the concrete beings from which it is abstracted. There is no immaterial form of tigers above the many tigers. Rather, there is only the one form of tiger *in* the material tigers.

3.2 Universal Causes

Let me now turn to the second kind of universal distinguished by St. Thomas Aquinas: universal causes. What is meant by a universal cause? What St. Thomas means by it is not a cause that has many effects that are on the same plane of being—for example, one mother who has many children. (The scholastics call such a cause a “univocal cause,” because it has the same nature as its effects.) But he means rather a cause that has many effects, while being on a higher plane of being, as it were, than the many effects. (The scholastics call this an “equivocal cause,” because it has a different nature than its effects.) Why might one think such causes exist? Ronald McArthur, the founding president of Thomas Aquinas College, wrote an essay on universal predicates and universal causes in which he offers the following argument:

It is manifest by induction that Socrates comes to be, and that he is generated by his mother; his existence is necessarily dependent upon hers in such a way that if she

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had not been, he would not now be. A question, however, remains; Socrates's mother causes an effect similar to herself, for Socrates is an individual with the same nature as she. Since the mother was also generated and at one time was not, and since human nature is found in her, it follows that she is not the cause of that nature, either in herself or in Socrates; if she were the sole causal explanation of the nature of Socrates, she would (since she also has that nature) have to be the cause of herself. It is the same with all univocal causality; no univocal cause can be the cause of the nature of the species in which it participates. The mother is the cause only of the existence of human nature in Socrates. She is not the cause of the form, but of the informed composite, since it is the composite which is generated. It is necessary, therefore, if we wish to explain the nature as such, to seek a cause which transcends both son and mother.²⁰

Note the similarity of this argument to Socrates's argument about the couch-maker in *Republic X*. Just as the couch-maker does not make the idea of the couch, so the mother of a human being does not generate human nature. But the conclusion is slightly different. Instead of concluding to a separate form ("the man itself"), McArthur concludes to a higher kind of cause, a cause of human nature as such.

This is what is meant by a "universal cause." This is a different kind of universal than a universal form. This kind of universal is not said of particular things. We do not say "this man *is* the universal cause of human nature." Nor is this kind of universal of the same nature as the particular effects that it causes. It must in some way contain the being that it gives its effects (since nothing can give what it does not have), but it contains that being in

²⁰ Ronald P. McArthur, "Universal *in praedicando*, universal *in causando*," in *Laval théologique et philosophique* 18.1 (1962): 59–95, at 69–70.

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a higher mode than the effects themselves contain it. Just as a couch-maker must in some way already have the form of couch contained in the power of the art in his soul if he is to cause it in material out of which he makes a couch, so the universal cause must have all the perfections that it gives in a higher way.

McArthur goes on to show many differences between these two kinds of universal. For example, while a universal predicate is vague and confused, compared to the specificity of particulars, the universal cause has the being that it gives to particulars in a more intense mode than those particulars themselves. The universal cause causes not just general features of its effects, but the whole particular effect in its ultimate specificity.

Conclusion: Wisdom and the Form of the Good

As I noted earlier, Aristotle holds that the wise man has the most universal knowledge. In his commentary, St. Thomas Aquinas argues that this should not be taken to mean only that the wise man knows universal predicates (so that he can say, for example, “being is,” and have thereby said something true about all things), but more importantly that he knows universal causes. This fits with the rest of Aristotle’s discussion of the wise man in *Metaphysics* 1.2. He argues that the wise man not only knows all things, and the most difficult things, but also has the most precise knowledge, that he is most able to teach, and that he knows what is worth knowing for its own sake, rather than for something else. Therefore, Aristotle concludes, what the wise man knows are first principles or causes of things, including that cause which is their last end or purpose:

So from all the things that have been said, the name sought [i.e., wisdom] falls to the same kind of knowledge, for it must be a contemplation of the first sources and causes, since also the good, or that for the sake of which,

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is one of the causes.²¹

Later on in the *Metaphysics* it will become clear that these “first” causes have the features that I have associated with “universal” causes. Hence St. Thomas was able to read the feature of “knowing the universal” that Aristotle ascribes to the wise man, as referring not to knowing universal predicates, but to knowing universal causes.

In *Metaphysics* 12, Aristotle approaches the first causes by an analysis of causes of motion and change, of what we can call agent causes. I do not want to follow him through all the steps of that argument, but I do want to point out that at the end of that argument he changes over to talking about a different *kind* of cause, namely “the good” or the “final cause.”

To understand this shift it is useful to recall Aristotle’s famous distinction between four kinds of cause in the *Physics*. There he distinguishes the material out of which something is made; the form that makes the material to be a definite thing; the agent, which puts the form in the material; and the end or good, for the sake of which the agent puts the form in the material.²² The causality of the other causes depends on the causality of the good, since the material and form can only be causes when the agent joins them, and the agent can only act if he has some reason for acting, which is given by the good he is trying to achieve.

The good is thus primary, since it moves everything else, but is itself unmoved.²³ The good is the object of desire and choice, it is that for the sake of which every movement and change takes place. The first unmoved mover that Aristotle finds in *Metaphysics* 12 is therefore good:

The final cause, then, produces motion as being loved,

²¹ Aristotle, *Metaphysics* 1.2, 982b9–10, trans. Sachs.

²² See Aristotle, *Physics* 2.7 and 2.3.

²³ Aristotle, *Metaphysics* 12.7, 1072a25–35.

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but all other things move by being moved. Now, if something is moved it is capable of being otherwise than as it is. . . . But since there is something which moves while itself unmoved, existing actually, this can in no way be otherwise than as it is. . . . The first mover, then, exists of necessity; and in so far as it exists by necessity, its mode of being is good and it is in this sense a first principle.²⁴

The first and most universal cause, therefore, is the good. Here Aristotle's argument converges with that of Socrates in *Republic* VI–VII. But while Socrates arrives at the form of the good that is both a universal predicate and a universal cause, Aristotle arrives at a good which is only a universal cause, but not a universal predicate. This good is not said of other good things. This good, Aristotle argues, is a living, thinking being. He calls it “the God” (ὁ θεός):

If, then, God [ὁ θεός] is always in that good state in which we sometimes are, this compels our wonder; and if in a better this compels it yet more. And God *is* in a better state. And life also belongs to God; for the actuality of thought is life, and God is that actuality; and God's self-dependent actuality is life most good and eternal. We say therefore that God is a living being, eternal, most good, so that life and duration continuous and eternal belong to God; for this *is* God.²⁵

This compels our wonder: It is this wonder at the universal cause and source of all being, perfection, and goodness that is for me the greatest inspiration for the path of philosophy. Max Weber, would take this as a sign that I am an “overgrown child.”²⁶ But when it comes to the search for that ἀμήχανον κάλλος, that overwhelming beauty, I am content to be a child.

²⁴ Ibid., 1072b3–12, trans. Ross.

²⁵ Ibid., 1072b24–29, trans. Ross (*italics in original*).

²⁶ See Weber, “Science as a Vocation,” 16–17.

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**A DEFENSE OF THE DISTINCTION
BETWEEN PLANTS AND ANIMALS**

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Aristotle divided the realm of material living beings into non-sentient living things (plants), sentient, non-rational living things (animals), and rational animals (humans), and Aquinas concurs with this division. While the difference between humans and animals has received extensive attention by Neo-Thomists, the difference between plants and animals has been largely neglected.¹ This is understandable since until fairly recently there has been little reason to reexamine the categories of plant and animal. However, nowadays it has become increasingly common to find mainstream scientists who claim that plants are sentient.²

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1 I have only seen one neo-Thomist address the question of plant sentience: Nicanor Austriaco. See Nicanor Pier Giorgio Austriaco, OP, "Immediate Hominization from the Systems Perspective," *The National Catholic Bioethics Quarterly* 4, 4 (Winter 2004), 729–30.

2 Some of the biologists who affirm that plants are sentient include: František Baluška, Paco Calvo, Daniel Chamovitz, Monica Gagliano, and Stefano Mancuso. And then there are even biologists who go so far as to attribute intelligence to plants; see Anthony Trewavas, "Aspects of Plant Intelligence: An

There is even a scientific society founded in order to promote the study of the underlying causes of sensing in plants.³ In this essay I will give reasons to uphold the Aristotelian division of plant and animal, and I will show that the claims made by those who hold that plants are sentient involve faulty reasoning.⁴ At stake

Answer to Firn,” *Annals of Botany* 93 (2004), 353–57. Note that there are many plant scientists who disagree with those that affirm that plants are sentient. See Jon Mallett, Michael R. Blatt, Andreas Draguhn, David G. Robinson, and Lincoln Taiz, “Debunking a Myth: Plant Consciousness,” *Protoplasma* 258 (2021), 459–76. See also Lincoln Taiz, Daniel Alkon, Andreas Draguhn, Angus Murphy, Michael Blatt, Gerhard Thiel, and David G. Robinson, “Reply to Trewavas et al. and Calvo and Trewavas,” *Trends in Plant Science* 25, 3 (March 2020), 218: “At a recent conference the question was raised of why we had bothered to publish an article making such an obvious point: that plants are fundamentally different from animals. The answer is that, due to the heavy media coverage, we felt that it had become necessary to counter the growing public perception that plant biologists had demonstrated that plants have emotions, cognition, and carry out intentional acts as animals do, whereas the overwhelming majority of plant biologists reject such zoocentric paradigms of plant behavior. The photoautotrophic lifestyle of plants dictated an alternative pathway to evolutionary fitness. Instead of subjective consciousness, plants evolved adaptive behavior that is genetically determined by natural selection and epigenetically determined by environmental factors.”

3 The Society for Plant Neurobiology, founded in 2005, is now called the Society of Plant Signaling and Behavior. See František Baluška and Stefano Mancuso, “Plant Neurobiology as a Paradigm Shift Not Only in the Plant Sciences,” *Plant Signaling and Behavior* 2, 4 (2007 Jul–Aug), abstract: “Emerging research document that plants sense, memorize, and process experiences and use this information for their adaptive behavior and evolution.”

4 Woese et al. deny that plants and animals are fundamental divisions of living things: “Our present view of the basic organization of life is still largely steeped in the ancient notion that all living things are either plant or animal in nature. Unfortunately, this comfortable traditional dichotomy does not represent the true state of affairs.” Carl R. Woese, Otto Kandler, and Mark L. Wheelis, “Towards a Natural System of Organisms: Proposal for the Domains Archaea, Bacteria, and Eukarya,” *Proceedings of the National Academy of Sciences, USA*, 87 (June 1990), 4576. Woese et al. support their rejection of the plant-animal dichotomy by noting that evolutionary and molecular differences between other categories of living things, for example, between Monera (prokaryotes) and plants, are far greater than those between plant and animal. I am going

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is our understanding of what constitutes the most fundamental divisions of living things.

What Does It Mean to Sense?

The living thing that we know first and best is ourselves. We know what sensing is, at least in a confused way, because we ourselves sense. What does it mean to sense? It means to know individual colors, sounds, and other sensibles. Since we have another kind of knowledge, that is, intellectual knowledge, I am going to use the word “aware” in speaking about sense knowledge. Thus, to see is to be aware of specific instances of color (even if only of color on a grayscale), and smelling is awareness of this or that odor, and so forth.

It is not possible to define sensing in terms of something better known. Aristotle attempts to define it partly in terms of what it is not: It is the reception of sensible forms of things without the matter. Much has been written on what Aristotle means to convey and I do not intend here to enter at length in the debate. Briefly, I think that Aristotle means to contrast sensing with a purely physical change. A coal heats a poker. The poker does not turn into coal, but it becomes like the coal in being hot. The poker receives the same type of accidental form that the coal has, but not the matter of the coal. However, it receives this accidental form in the same manner that the coal possesses it: it, like the coal, is hot. By contrast, sensing is not a matter of the sense coming to possess the same type of accidental form in the same manner. Rather, the more the sense becomes physically like the thing it senses, the less sensitive it becomes; for example, when one’s hand becomes the same temperature as the water it’s in, one no longer feels the temperature of the water. For this reason,

to restrict my defense of the plant-animal dichotomy to the cases where it is denied on the grounds that plants too are sentient.

John of St. Thomas understands “the reception of form without matter” to refer to the knower’s receiving the form of another as other while remaining itself: feeling an object’s heat is other than becoming hot oneself.⁵ Thus, if one is to claim that a being is sentient, it is necessary to provide evidence that something more than a physical change occurs in it.⁶

We humans not only sense, but we also sense that we sense. I’m going to use the word “consciousness” to refer to our awareness that we are sensing. We often sense qualities, quantities, and position without being conscious that we are doing so; for example, when walking, we often avoid tripping on uneven pavement without being consciously aware that we are sensing the unevenness. If we are sensing something, however, we can become conscious that we are doing so.

Many Life Activities in Humans Do Not Involve Sensing

In addition to knowing that we sense, we also know that food nourishes us and that we grow—or have grown. We have no consciousness of these activities, which indicates that they do not involve sense perception. We know that we grow not because we sense ourselves growing, nor because we sense the underlying processes which result in growth. We know we grow because of comparisons we make, for example, “I am now taller than Mom.” “My pants don’t fit any more.” Similarly, while we are aware of how food tastes and feels, we are not aware of what goes on in nutrition, once we swallow the food. We are aware of feeling weak if we do not eat, and sometimes of our belly bloating; and

⁵ See John of St. Thomas, *Cursus Philosophicus Thomisticus* (Turin: Marietti, 1937), part 4, q. 4, a. 1.

⁶ In order for humans to see red, red light has to hit the cones in their eye, which results in it being converted into electrical signals that are transmitted to their brains via the optic nerve. Seeing or the awareness of color, however, is not reducible to this physical chain of events.

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we know that excretion in some way depends on eating, and there are other clues as well. But exactly what goes on in nutrition does so without our sensing it; and this is also the case for the production of sperm and the maturation and release of eggs. These vegetative activities would not go on any better by our being aware of them; indeed, being aware of them would be distracting.

It would seem, then, that since nutrition, growth, and the production of germ cells go on in us without sensation, then there is no need for sensation in order for other organisms to perform these activities. From the point of view of finality, there is reason to think that other organisms are not going to be endowed with sense perception to execute these same fundamental activities, for this would be superfluous.⁷

*The Directional Character of Certain Life Activities
of Plants*

The reasoning above seems to overlook a pertinent fact about plant growth. It is not plants' growth per se that has motivated some scientists to assert that plants are sentient. It is the fact that their growth is directional and variable. Compare the growth of an animal with bilateral symmetry, for example, a dog, with the growth of a tree. If development takes place normally, the dog will eventually have one head, a torso, and four legs, the legs being very close in size and placed in determinate locations on

⁷ Stated in evolutionary terms, an organism using energy and materials to produce an unneeded sensory apparatus would be at a disadvantage as to surviving and leaving offspring. Species that originated in areas where a given sense no longer serves its purpose, for example, cavefish, typically lose it. It must be noted, however, that selection is not the only driver of evolution, and so it is not absolutely impossible that sentience arises as an accessory for a given vegetative activity. However, it is strange to think that organisms that have fewer types of cells and are less structured would have a sensory organ for performing activities such as nutrition and growth when more complex organisms do not.

the torso. A tree of a given species, on the other hand, does not have a determinate number of branches, and where the branches are placed on different individual trees varies, as do their size and orientation. The number, size, and orientation of the branches are not pre-determined by internal factors, as is the case with the number and arrangement of the dog's parts but depends in large part on the light that is available.⁸ Indeed, trees have the challenge of growing their branches in such a manner so as not to obstruct light from their other branches. It seems, then, that trees (and other plants) need to know where the light is so that their branches and/or leaves grow in the manner most apt to sustain their lives. And the same seems to be true with root growth toward water. The plants seem to have to know which way their roots should grow. And there are other direction-specific responses in plants, such as the hypersensitive response (to be discussed later).

One could also add here as being problematic, plants' seasonal responses, such as losing leaves in the winter, growing new leaves in the spring, and flowering at the right time. Does not the plant have to know when to do these things? For the sake of brevity, I will focus mainly on directional growth. However, consulting a plant physiology book would show that the general point that I will make concerning directional growth also applies to plants' temporal responses.

Before I respond to the question raised by the directional character of plant growth, I will first address some other activities of plants that might seem to require sensation.

8 Some organisms that have radial symmetry do have a somewhat indeterminate number of arms (or rays). This is the case of certain starfish that start out with five arms but can grow up to as many as 50. These organisms, however, do not grow directionally as do plants, which grow toward something outside of themselves, such as light or moisture.

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*Defense from Harmful Agents, Adaptation, and Homeostasis
Do Not Necessarily Require Sensation*

Here we will examine whether plants need to sense in order to adapt or to defend themselves from harmful agents or for homeostasis.

In the case of adaptation, biologist Nicanor Austriaco maintains:

Modern biologists would challenge this account [i.e., that there is a nutritive soul that is other than the sensitive soul] because all living things have to respond and to adapt to their environments to survive, and they do this by sensing different external cues. Thus, all living things must have sensitive souls.⁹

⁹ Nicanor Austriaco, personal communication with the author shared by email on 2/20/2019. Indeed, it is not hard to find biologists who base the claim that plants sense on their need to adapt to changes in the environment. For example, biologist Daniel Chamovitz asserts: “rootedness is a huge evolutionary constraint. It means that plants can’t escape a bad environment, can’t migrate in search of food or a mate. So plants had to develop incredibly sensitive and complex sensory mechanisms that would let them survive in ever changing environments. I mean if you’re hungry or thirsty you can walk to the nearest watering hole But plants are immobile. They need to see where their food is. They need to feel the weather, and they need to smell danger.” Quoted in Gareth Cook, “Do Plants Think?” *Scientific American* (June 5, 2012), 3, <https://www.scientificamerican.com/article/do-plants-think-daniel-chamovitz/>. Note that a subsidiary argument sometimes offered for plant sentience is the plant’s ability to adjust its response in function of multiple stimuli present in the environment: “The plant lives in a vast interactive sphere, both above and below the Earth, filled with chemical compounds that supply countless tidbits of information. It is exposed to numerous interactions, and that is why it must also be constantly aware of what is going on around it.” Massimo Maffei, quoted in “The Silent Scream of the Lima Bean,” Congress report, Chemical Ecology, *MaxPlanckResearch* 4 (2007), 65. However, a response to multiple stimuli need not involve sentience, as is plain in the case of cells within the body, as they receive multiple signals from other cells, affecting their development and growth. (The fact that plants respond to external factors is no reason to assume sentience, as is illustrated by the cases of the melanocytes and acclimatization

Many adaptations, however, take place without sensation, e.g., acclimatization to both altitude and temperature. What happens in the case of acclimatization to altitude is that the body needs a certain amount of oxygen to carry on vital processes, but the lower pressure of higher altitudes “makes it more difficult for oxygen to enter our vascular systems.”¹⁰ Adaptation consists in changes in the body that help overcome this difficulty. What are these changes?

When we travel to high mountain areas, our bodies initially develop inefficient physiological responses. There is an increase in breathing and heart rate to as much as double. . . . Later, a more efficient response normally develops as acclimatization takes place. Additional red blood cells and capillaries are produced to carry more oxygen. The lungs increase in size to facilitate the osmosis of oxygen and carbon dioxide. There is also an increase in the vascular network of muscles which enhances the transfer of gases.¹¹

The changes producing the acclimatization are not triggered by sense perception of lower air pressure; it is the lower air pressure itself that triggers them, and they go on without our sensing them. Thus, it is not true that adaptation always requires sensation.¹²

to altitude, discussed later.)

¹⁰ Dennis O’Neil, “HUMAN BIOLOGICAL ADAPTABILITY: An Introduction to Human Responses to Common Environmental Stresses,” https://www2.palomar.edu/anthro/adapt/adapt_3.htm.

¹¹ Ibid.

¹² Another example of adaptation not involving sensation is the resetting of our internal circadian clock. We do not sense what does this, which is why it took us a while to figure out strategies to overcome jet lag. And as Vincent Torley notes, phenotypic plasticity is another example of adaptation that does not involve cognition on the plants’ part, but rather simply results from the activation of a “built-in set of possible phenotypic responses” by an environmental cue. Vincent Torley, “Excursus Plants,” <http://www.angelfire.com/linux/vjtorley/plants.html>.

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Even machines are capable of changing behavior in response to environmental changes so as to function better. For example, one can train Siri to more accurately convert one's voice to text. Thus, observation of this type of response, independent of other knowledge of the being in question, does not even allow one to conclude the being is alive, much less sentient.¹³

Plants are able to adapt to many stressful conditions. However, research on how they do so proposes accounts that involve biochemistry rather than sensation. Here is a typical example, taken from the abstract from a paper on cold acclimation:

Molecular as well as biochemical mechanisms underpinning plant cold acclimation are very complex and interwoven. The cold-impacted plants try to modulate expression of a variety genes controlling cell membrane lipid composition, mitogen-activated protein kinase cascade, total soluble proteins, polyamines, glycinebetaine, proline, reactive oxygen species (ROS) scavengers, cryoprotectants, and a large number of cold responsive factors.¹⁴

Homeostasis is maintained without sensation. For example, sodium and glucose levels in blood are regulated without being sensed. As for defense from enemies, while doing so sometimes requires sensation, there are many examples when it is not required, for example, our immune system fights off germs

¹³ Here the problem of the ambiguity of vocabulary arises. One might say that even machines are capable of "adapting," understood as changing behavior in response to environmental changes so as to function better. Our natural tendency to extend words to name like things results in a loss of precision and an increased potential for equivocation.

¹⁴ R. John, N. A. Anjum, S. K. Sopory, N. A. Akram, and M. Ashraf, "Some Key Physiological and Molecular Processes of Cold Acclimation," *Biologia Plantarum* 60, 4 (2016), 603.

without our being aware of it.

In principle, then, a living thing could adapt and defend itself from foreign invaders without sentience, and thus having sentience for the purpose of doing so would be superfluous. Some reason would have to be given for why a specific defense or a specific adaptation required sensation.

How Does One Judge That a Living Thing, Other Than Human, Senses?

Certainly, observing its behavior is a key element. The behavior is not the sense perception, but certain behaviors would be inexplicable in the absence of sense perception. Some behaviors are directly connected to sensing, for example, looking, listening, and sniffing. These behaviors are voluntary attempts to sense something or to continue to sense something. Then there are behaviors other than those of directing the senses that could not be accomplished in the absence of sensation. One example is an earthworm holding something in the right orientation to get it into the earthworm's hole; as Darwin observes: "if worms are able to judge . . . having drawn an object close to the mouths of their burrows, how best to drag it in, they must acquire some notion of its general shape."¹⁵ Plainly, in observing the organism's behavior one needs to determine what is provoking or stimulating the behavior—is it the visible, the audible, and so on? Bats catch insects, but not because the insects are visible. One needs to narrow down what the organism is responding to, by observing it in situations where other things it could be responding to are eliminated.

The presence of an organ similar to our sense organs is often also helpful for determining that an organism senses.

¹⁵ Charles Darwin, *The Formation of Vegetable Mould Through the Actions of Worms*, <https://charles-darwin.classic-literature.co.uk/formation-of-vegetable-mould/ebook-page-21.asp>, 17.

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Though some organs have somewhat similar appearances but different functions, such as the swim bladder in fish that resembles a lung but is used to control the fish's position in water, highly structured organs are unable to carry on different activities.¹⁶

*Sensation Is Not Needed to Explain Directional
Plant Responses to External Agents*

With these criteria in mind, let us now consider plants in more detail. At the basis of claims that plants are sentient are their various responses to things outside of them, especially when those responses are directional, as is the case of growth toward light or toward water.

First, it should be noted that growth in one part of an organism but not in a corresponding part can occur in response to external causes without sensation being present. People who use hand tools often form calluses on the hand wielding those tools but not on the other hand, and calluses are formed by the growth of extra layers of skin. Similarly, muscle growth in one arm may be greater than in another due to differences in usage.

To evaluate the view that directional growth requires sensing on the part of plants, let us consider whether plants that grow toward light have an organ for sensing light. Austriaco argues:

The tip of the coleoptile¹⁷ is the part of the young, growing plant that allows the plant to sense and respond to light . . . specifically blue light . . . by growing in the direction

¹⁶ Though obviously not just any molecules and structures are going to allow for the perception of a given sensible, I do not know whether we know enough to be sure in advance of the sort of molecules and structures that are necessary. For example, are neurons necessary for sense perception? Note that while similarity between known sense organs and what is found in putatively sensing organisms is a sign that the latter indeed senses, the lack of similarity does not definitively rule out the possibility that the organism is sentient.

¹⁷ The coleoptile is the protective sheath that covers the emerging shoot.

of the light.¹⁸ If you cut off the tip . . . then the plant will ignore the blue light and continue to grow straight up. In the same way, I can destroy the few light sensing cells in a worm, and when I do this the worm will ignore the light. . . . [I]f you know that you are disrupting sensing in the worm because it now responds differently to light by removing the light sensing organ then you have to say that you are also disrupting sensing in the plant because it now responds differently to light after you disrupt its sense organ.¹⁹

However, a 2013 article entitled “Phototropism: Translating Light into Directional Growth” explains what occurs in purely photo-biochemical terms.²⁰ The blue light photoreceptors in the

18 The fact that a being’s response arises from a specific stimulus within a category (e.g., it responds to blue light and not red) is not sufficient evidence that it is sentient, as there are machines that respond in this manner, for example, transferring voice to text for someone speaking English but not for someone speaking Chinese.

19 Nicanor Austriaco, personal communication with the author via email, 11/30/2017.

20 See T. Hohm et al., “Phototropism: Translating Light into Directional Growth,” *American Journal of Botany* 100, 1, (2013), 47: “[the blue light photoreceptors in the coleoptile tip] (phot1 and phot2 in Arabidopsis) . . . are light-activated protein kinases. The kinase activity of phototropins and phosphorylation of residues in the activation loop of their kinase domains are essential for the phototropic response. These initial steps trigger the formation of the auxin gradient across the hypocotyl that leads to asymmetric growth.” See also David Goodsell, “Molecule of the Month, Phototropin” (March 2015), <http://pdb101.rcsb.org/motm/183>. Note that the cones and rods of the human eye contain photoreceptors with an overall similarity to the phototropins of plants, as they consist of a chromophore bound to a protein, with light causing a change in the chromophore that induces a conformational change in the protein it is embedded in. Unlike plants, human have an organ of sight, the eye along with part of the brain, the visual cortex. One might argue that the plant’s blue light receptors should be considered an organ since they are similar to the odor molecule receptors that lie in the nasal cavity which constitute the organ of smell. This overlooks the fact that the organ of olfaction is not simply the receptors but also includes part of the brain.

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coleoptile tip, called phototropins, consist of a protein with two chromophores embedded in it. Chromophores absorb photons and this changes their structures, which change has an effect on the protein in which they are embedded, which in turn triggers chemical changes leading to the auxin gradient which causes asymmetric growth (auxins are growth hormones). It is not the plant's seeing blue, but rather the absorption of a photon and the subsequent changes that this causes, that lead to growth. Plainly, if one removes any part of the chain that leads ultimately to growth, growth will not occur. But this has no bearing on whether sensing light has taken place. Some reason has to be given for why sensing blue must be added to the chain of physical causes that are proposed as an explanation for the differential growth.²¹

²¹ A less prosaic reason for maintaining that plants see than their growing toward light is found in the case of the *Boquila* vine, which mimics the leaves of other plants. It seems that *Boquila* has to see what the plant leaves they mimic look like in order to mimic them. According to Gianoli et al., "*Boquila* is able to mimic the leaves of over a dozen tree species when growing onto them or in close proximity. Moreover, an individual *Boquila* plant associated with two different tree species can mimic both of them. Leaf mimicry by *Boquila* has been characterized in terms of leaf size, shape, colour, orientation, petiole length, and leaf tip spininess." Ernesto Gianoli, Marcia González-Teuber, Claudia Vilo, María J. Guevara-Araya and Víctor M. Escobedo, "Endophytic Bacterial Communities Are Associated with Leaf Mimicry in the Vine *Boquila trifoliolata*," *Science Reports* 11, 22673 (2021), <https://doi.org/10.1038/s41598-021-02229-8>). A hypothesis alternate to sight is the horizontal gene transfer hypothesis, according to which genes from the mimicked plant are transferred into and then expressed by *Boquila*. According to Gianoli et al., "Our results suggest the involvement of bacterial agents in leaf mimicry in *Boquila*, yet we are still far from proving the HGT [Horizontal Gene Transfer] hypothesis." White and Yamashita in a 2022 paper argue against the HGT hypothesis and in favor of the sight hypothesis in light of their experiment in which *Boquila* imitated a plastic plant; see Jacob White and Felipe Yamashita, "*Boquila trifoliolata* mimics leaves of an artificial plastic host plant," *Plant Signaling & Behavior* 17, 1 (2022), e1977530. However, plant scientists Ernesto Gianoli and John Pannell were highly critical of how the experiment was done; see Christie Wilcox, "Can Plants See? In the Wake of a Controversial Study, the Answer's

From the point of view of finality, the plant is not going to react any better for seeing the light any more than we would digest our food better if this was a sensed process.

The 2011 discovery that melanocytes (the skin cells that produce melanin) contain rhodopsin, a light receptor found in the eye,²² puts in sharp relief the gratuitousness of attributing sight to plants. Activation of this receptor “unleashes calcium ion signals that instigate melanin production.”²³ Plainly, we do not see with our skin. Similarly, the activation of the plant’s light receptors causes a series of biochemical reactions resulting in a teleological response. There is no reason to say that the plant sees any more than there is to say that we see with our melanocytes.²⁴

The same type of explanation that is given for plants’ growth toward blue light is proposed in other cases of their directional growth. For example, plants need to detect where water is in order to send out roots. We do not entirely know

Still Unclear,” *New Scientist* (November 30, 2022), <https://www.the-scientist.com/news-opinion/can-plants-see-in-the-wake-of-a-controversial-study-the-answer-is-still-unclear-70796>. In any case, there are very few plants that mimic the leaves of other plants. So even if *Boquila* sees—and so is really an animal—this does not show that your average plant sees.

22 See Nadine L. Wicks, Jason W. Chan, Julia A. Najera, Jonathan M. Ciriello, Elena Oancea, “UVA Phototransduction Drives Early Melanin Synthesis in Human Melanocytes,” *Current Biology* 21, 22 (Nov. 2011) 1906–11.

23 News from Brown, Nov. 3, 2011, “Skin ‘sees’ UV light, starts producing pigment,” <https://news.brown.edu/articles/2011/11/melanin>.

24 I learned about rhodopsin in melanocytes from Robert Todd Carroll’s 2016 four-part article, “Debunking Plant Sentience,” which unfortunately is no longer available on the internet. Skin cells are not the only cells that have non-visual light receptors. Non-visual light receptors are found both in the eye (they regulate the circadian rhythm), as well as in the central nervous system and in internal organs. See Thomas W. Cronin and Sönke Johnsen, “Extraocular, Non-Visual, and Simple Photoreceptors: An Introduction to the Symposium,” *Integrative and Comparative Biology* 56, 5 (2016), 758–63. See also Thomas Cronin, “Seeing Without Eyes – The Unexpected World of Nonvisual Photoreception,” <https://theconversation.com/seeing-without-eyes-the-unexpected-world-of-nonvisual-photoreception-79166>.

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how roots grow toward water, but the type of explanation that is advanced by scientists is along the lines of moisture triggering a physical or chemical change that in turn sets “in motion a signaling cascade leading to cell elongation.”²⁵ There is no evidence that the plants need to sense wetness.²⁶

Another asymmetrical response of plants to outside agents is the hypersensitive response. According to plant biologist Peter Balint-Kurti, “the plant hypersensitive response (HR) is a rapid localized cell death that occurs at the point of pathogen penetration and is associated with disease resistance.”²⁷ The plant kills some of its own cells in order to deprive the pathogen of nutrition.²⁸ The explanation scientists offer for this response is not in terms of the plant feeling or tasting or otherwise sensing the pathogen but rather in terms of pathogen effector molecules binding to receptors on the plant, thereby initiating a complex signal cascade in the attacked cells that ultimately leads to cell death at the infection site.²⁹

25 Daniela Dietrich, “Hydrotropism: How Roots Search For Water,” *Journal of Experimental Biology* 69, 11 (Jan. 2018), 8.

26 One plant motion that does not involve growth is the opening and closing of the stomata (i.e., pores defined by two guard cells) that allows for gas exchange. Part of the explanation for how the stomata open is: “blue light activates a proton pump in the guard cell plasma membrane,” and this causes “ion and water uptake in the guard cell protoplasts, which in the intact guard cells provide a mechanical force that drives increases in stomatal apertures. In the absence of a rigid cell wall, the guard cell protoplasts swell.” Lincoln Taiz and Eduardo Zeiger, *Plant Physiology*, 2nd edition (Sunderland, MA: Sinauer Associates, Inc., 1998), 524. The plant need not sense blue light in order for the light to activate the proton pump. (Protoplasts are cells that do not have a cell wall.)

27 Peter Balint-Kurti, “The Plant Hypersensitive Response: Concepts, Control and Consequences,” *Molecular Plant Pathology* 20, 8 (August 2019), 1163.

28 See Ankita Thakur, Shalini Verma, Vedula P. Reddy, Deepika Sharma, “Hypersensitive Responses in Plants,” *Agricultural Review* 40, 2 (April–June 2019), 113.

29 See *ibid.* See also Balint-Kurti, “The Plant Hypersensitive Response,” 1163.

*Equivocation Is Sometimes Involved in Claims
that Plants Are Sentient*

Accounts of how plants achieve directional growth often include terms such as “gravisensing,”³⁰ and “mechanosensation.”³¹ We need to examine the various ways in which words such as “sensing” are used. A “sensor” changes in response to some specific external thing and generally this change is set up to trigger another change. Sensors are often called “sensing devices” and are sometimes said to sense.³² Of course, sensors, such as thermostats, are not aware of hot and cold. Changes in heat energy cause a physical change in part of the thermostat and this change causes other changes (such as completing a circuit) ultimately resulting in a device going on or off, a valve opening or closing, and the like. The same is true for other sensors; they do not sense, that is, they are not aware of motion, moisture, carbon monoxide, and so on. These devices are typically tools for our senses, alerting us to the presence of sensible things that

30 See, for example, Daisuke Kitazawa et al., “Shoot circumnutation and winding movements require gravisensing cells,” *PNAS* 102, 51 (December 20, 2005), 18742–47.

31 Plants need mechanosensation for activities such as the growth of their roots, growth in response to wind, and trap-closure in the case of the Venus Flytrap. This leads some to say that plants sense; see, for example, Jennifer Bohm, et al., “The Venus Flytrap *Dionaea muscipula* Counts Prey-Induced Action Potentials to Induce Sodium Uptake,” *Current Biology* 26, 3 (Feb. 8, 2016), 287: “During evolution, plants developed senses to recognize mechanical forces.” However, there is mechanosensation that is plainly non-sentient; it plays a role in “fundamental cell functions including cell division, motility, and differentiation.” W.H. Goldman, “Mechanosensation: A Basic Cellular Process,” *Progress in Molecular Biology and Translational Science* 126 (2014), 75–76. Thus, some reason would have to be given to show that sentience is required for the mechanosensation of plants.

32 For example: “The [engine] thermostat senses the coolant temperature.” StudentLesson, “Things you must know about automobile thermostat,” <https://studentlesson.com/thermostat-definition-functions-components-diagram-working/>.

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we cannot or cannot readily sense. And that is why we call these devices sensors and why we sometimes also say that they sense. This usage of “sense” is plainly equivocal. For the sake of clarity, I am going to arbitrarily use the word “detect” to name a non-cognitive change in response to a specific thing, which change has some utility, and restrict my use of “sense” to awareness of color, sound, and so on.

I acknowledge that using “detect” in this way is not an ideal solution as it obscures differences between what plants do and what artificial things do. For example, the detection of moisture in wood by a moisture meter does not benefit the meter itself but rather helps us, whereas the detection of moisture by the plant’s root allows the plant to grow toward the water it needs to maintain itself. This difference highlights a problem with language. There is no precise word that names an interaction between a living thing and something in its environment that results in a non-sentient teleological response. The words that scientists typically use are “sense” and “perceive.” Some scientists recognize that these words have been transferred from naming awareness in animals and are not univocal.³³ Thus, when they use these words in regard to plants, they are not affirming that plants are aware of sensible qualities. For example, Axel Mithöfer and

33 “Perception” is another word that, like “sensing,” is sometimes used to name activities that occur independent of sensation. Scientists talk about “the perception of a signal by a specific receptor;” this “perception” consists in the binding of the extracellular signaling molecules to receptors located on the cell, which binding causes a conformational change in the receptor which triggers changes within the cell. The simple fact that a receptor binds the extracellular signaling molecule does not establish that sense perception is taking place, as in many cases it is known to occur without sense perception. Thus statements such as: “we will also discuss advances in herbivore recognition, namely, the perception of insect-derived signals by specific binding proteins” cannot be taken as evidence that plants are sentient. Axel Mithöfer and Wilhelm Boland, “Recognition of Herbivory-Associated Molecular Patterns,” *Plant Physiology* 146 (March 2008), 825.

Wilhelm Boland say:

To successfully combat aggressors, plants must be equipped with a sophisticated sensory system to perceive signals fast and efficiently from their environment and thereby detect potential enemies and subsequently translate and integrate such signals into appropriate biochemical and physiological responses.³⁴

Yet Mithöfer, when asked whether he thought plants are sentient, responded: “The data available are not that clear yet. In my opinion I’d say NO.”³⁵ Some scientists, however, seem to take such words univocally. One wonders whether Austriaco is not misled by the limitations of language when he reasons:

all living things have to respond and to adapt to their environments to survive, and they do this by sensing different external cues. Thus, all living things must have sensitive souls.³⁶

In any case, later on we will see a clear instance where the equivocal use of “memory” vitiates one researcher’s reasoning concerning plant sentience.

*Faulty Reasoning Based on the Correlation
of Plant Responses with Accidents Sensed by Us*

People are more inclined to make unjustified leaps from detection to sensation when we happen to sense an accident (in the

³⁴ Mithöfer and Boland, “Recognition of Herbivory-Associated Molecular Patterns,” 825.

³⁵ Axel Mithöfer, personal communication with the author via email, 1/7/2019.

³⁶ Nicanor Austriaco, personal communication with author via email on 2/20/2019. One wonders to what extent the scientist’s habit of using of technical terms that have only one meaning makes them prone to assuming that words in general only have one meaning.

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Aristotelian sense of “accident”) than in cases where we do not. For example, since we do not smell CO₂, no one claims that the plants smell it, whereas since we can hear the sound of a caterpillar chewing, at least when it is amplified, some people maintain that when plants increase chemical defenses against caterpillars in response to exposure to this sound, and not to other sounds, it must be because the plants hear.³⁷ Yet evidence that the plants have a sense organ for hearing is lacking.³⁸ Moreover, the research paper on this topic is entitled: “Plants Respond to Leaf Vibrations Caused by Insect Herbivore Chewing.”³⁹ Sound waves are mechanical waves: They cause things that lack hearing to move. Thus, it may simply be the case that the jiggling of the plant by the sound waves triggers a series of reactions in the plant that ultimately result in an increase of defense chemicals in the leaves. Those who claim that hearing is involved need to provide evidence beyond the fact that the plant responds to specific sound waves.

Another example where the fact that something can be sensed by us paves the way to the assumption that it is sensed by the plant is the case of Daniel Chamovitz’s attribution of the sense of smell to dodder plants. Dodders, when placed between

37 See, for example, IFL Science, “Plants Can Hear Themselves Being Eaten,” <https://www.iflscience.com/plants-and-animals/plants-can-hear-themselves-being-eaten/>. M. Gagliano et al.’s paper, “Tuned In: Plant Roots Use Sound to Locate Water,” *Oecologia* 184, 1 (May 2017), 151–60, is also interpreted by some to show that plants hear. However, the paper gives no evidence that the plant does more than respond to certain vibrations that are audible to organisms that hear.

38 Carel ten Cate, in response to Monica Gagliano’s call for studies on acoustic communication in plants, notes that the advantages of such communication presuppose the possession of sophisticated sensory mechanisms, “mechanisms not known from plants.” “Acoustic Communication in Plants: Do the Woods Really Sing?” *Behavioral Ecology* 4, 1 (July 2013), 799.

39 H. M. Appel and R. B. Cocroft, “Plants Respond to Leaf Vibrations Caused by Insect Herbivore Chewing,” *Oecologia* 175, 4 (August 2014), 1257–66.

a wheat plant and a tomato plant, preferentially grow towards the tomato, and similarly when exposed to the volatiles of these plants.⁴⁰ The dodders were then exposed to some of the individual compounds in the wheat and tomato volatiles one by one. It turns out that “one compound present in the wheat blend, (Z)-3-hexenyl acetate, is repellent, providing a plausible explanation for the lower attractiveness of the wheat blend.”⁴¹ However, the simple fact the compound is repellent and smell-able by us does not show that the plant smells it. It may simply cause a non-sentient physiological reaction in the plant, as occurs in other cases when ligands external to the plant bind with plant receptors.⁴²

40 See Cook quoting Chamovitz, “Do Plants Think?”: “in one classic experiment scientists showed that dodder prefers tomato to wheat because it prefers the smell.” Centuries earlier, Theophrastus maintained that plants smell: “when the vine is near cabbage or bay its shoot curves its tip and (as it were) turns back because of the pungency of the odour. For the vine is sensitive to smell.” *De Causis Plantarum*, Bk. II, ed. and trans. by Benedict Einarson and George K.K. Link (Cambridge, MA: Harvard University Press, 1990), vol. 1, sec. 18.4, 353.

41 Mark C. Mescher, Justin B. Runyon, Consuelo M. De Moraes, Article Addendum, “Plant Host Finding by Parasitic Plants: A New Perspective on Plant to Plant Communication,” *Plant Signaling & Behavior* 1, 6 (November/December 2006), 285.

42 There is no reason to say that plants taste the saliva of the insects chewing on them. While it is true that not many elicitor and receptor pairs are known in the case of herbivory, they are not entirely unknown. (The elicitors in the case of herbivory are called HAMPs, which stands for “herbivore associated molecular patterns.”) According to Santamaria et al., “examples of well-characterized plant receptors of HAMPs” include “the tomato receptor-like kinase SISERK1, the *A. thaliana* L-type lectin-receptor kinase LecPRK-1.8, and LRR receptor-like kinase BAK1 (brassinosteroid insensitive-associated kinase).” M. E. Santamaria, A. Arnaiz, P. Gonzalez-Melendi, M. Martinez, I. Diaz, “Plant Perception and Short-Term Responses to Phytophagous Insects and Mites,” *International Journal of Molecular Science* 19, 5 (May 3, 2018), 9. Researchers, despite having meager success so far in finding receptors in plants for chemicals in insect saliva, continue to look for them; they do not turn to sentience to explain plant responses to herbivory. And as for pathogen/microbial-plant interactions, they “are well established in terms of activated receptors between interacting partners.” Massimo E. Maffei et al., “Natural Elicitors, Effectors and

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Chamovitz, after mentioning that ethylene receptors have been found in plants, goes on to say: “Plants detect a volatile chemical in the air, and they convert this signal (albeit nerve-free) into a physiological response. Surely this could be considered olfaction.”⁴³ However, a paper by Caren Chang describes the ethylene-signaling pathway in detail.⁴⁴ Put in general terms, ethylene binds to a receptor which then causes a series of other biochemical changes in the plant. There is no organ involved, nor is there any need for the plant to be aware of the odor of the ethylene in order for the plant to respond to the ethylene.⁴⁵

It is even clearer that sensing is not involved when one considers the details of how the plant responds to ethylene. The

Modulators of Plant Responses,” *National Products Report* 29 (2012), 1300. For a list of plant receptors for bacterial, fungal, and oomycete pathogens, see Yusuke Saijo, Eliza Po-ian Loo and Shigetaka Yasuda, “Pattern Recognition Receptors and Signaling in Plant-Microbe Interactions,” *The Plant Journal* 93 (2018), 596.

43 Daniel Chamovitz, *What a Plant Knows: A Field Guide to the Senses*, updated edition (New York: Scientific American, 2017), 48.

44 Caren Chang, “Q&A: How Do Plants Respond to Ethylene and What Is Its Importance?,” *BMC Biology* 14, 7 (2016), <https://bmcbiol.biomedcentral.com/articles/10.1186/s12915-016-0230-0>. See also Hongwei Guo and Joseph R Ecker, “Plant Responses to Ethylene Gas Are Mediated by SCFEBF1/EBF2-Dependent Proteolysis of EIN3 Transcription Factor,” *Cell* 115, 6 (December 2003), 667–77.

45 Austriaco offers this as support for the notion that plants have a primitive sense of smell: “Finally, and most spectacularly, Arimura et al., in Japan, have demonstrated that lima bean plants communicate with each other and with insects. These authors showed that a lima bean plant that is under attack by spider mites emits volatile substances that prompt neighboring and distant lima bean plants to undergo physiological changes, that will protect them from a future attack of these mites. Furthermore, they also demonstrated that this same plant when it is being attacked emits signals that attract predatory mites that will feed upon the original infestation of spider mites.” Austriaco, “Immediate Hominization,” 729–30. As in the case of plants’ responses to ethylene, there is no reason to say here that the interaction between a plant and a volatile involve sensation. There is also no evidence at all that the plants are aware of communicating with other plants or insects.

plant itself may both produce ethylene and be exposed to ethylene from without. Ethylene diffuses across cell membranes. The receptors for ethylene are not on the surface of the plant's cells but rather are located within the cells, in the endoplasmic reticulum.⁴⁶ When these receptors bind the ethylene the plant itself produces, this does not result in sensation any more than when the plant's receptors bind other chemicals the plant produces (e.g., jasmonic acid receptors with jasmonic acid). There is no difference in what occurs when the plant's ethylene receptors bind ethylene that comes from an outside source than when they bind ethylene from an internal source. Thus, sensation does not occur in the former case anymore than it does in the latter. This example makes it clear that the fact that something from the outside triggers a reaction in a plant is no reason to conclude that it is sensed by the plant.⁴⁷

I note that the authors of the paper that established that the dodder “uses volatile cues to find its host” make no claim

46 See Chang, “Q&A: How Do Plants Respond to Ethylene.”

47 If every receptor-ligand interaction resulted in sensation, the millions of such interactions going on inside our bodies between our cells would constitute separate acts of awareness. Some reason needs to be given beyond the occurrence of such interactions if one is to assert that sensing is occurring. Some people may alternately claim that it is the individual cells that are sensing in the strict sense of sensing, but in doing so they reduce us to a mere collection of cells and deny our per se unity. Regarding receptor-ligand interactions within the body, see Jordan A. Ramilowski, Tatyana Goldberg, Jayson Harshbarger, Edda Kloppmann, Marina Lizio, Venkata P. Satagopam, Masayoshi Itoh, Hideya Kawaji, Piero Carninci, Burkhard Rost and Alistair R. R. Forrest, “A draft network of ligand–receptor-mediated multicellular signalling in human,” *Nature Communications* 6:7866 | DOI: 10.1038/ncomms8866, abstract: “Cell-to-cell communication across multiple cell types and tissues strictly governs proper functioning of metazoans and extensively relies on interactions between secreted ligands and cell-surface receptors. Herein, we present the first large-scale map of cell-to-cell communication between 144 human primary cell types. We reveal that most cells express tens to hundreds of ligands and receptors to create a highly connected signaling network through multiple ligand–receptor paths.”

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about it smelling odors.⁴⁸ Similarly, the researchers who experimented with vibrations made by caterpillars make no claim that the plants hear sounds.⁴⁹ Their silence indicates that those who are making such claims need to bring additional evidence to the fore.

What Is Learning and How Does It Relate to Sensing?

At first sight it seems that if a being learns, this is a sure indication that it senses. However, is it possible to define learning in the sense relevant to our discussion in a way that does not include sense perception in its definition?⁵⁰ It seems not. Learning means going from non-knowing to knowing (either that something is true or how to make or do something). If a thing is incapable of knowing anything to start with, then it cannot learn in this sense of “learn.”

If a thing cannot change its responses to things, plainly it cannot learn to do something. However, if it can change its responses, this does not necessarily mean that it can learn in the sense of going from being ignorant to knowing. This is clearest

48 J. B. Runyon, M. C. Mescher, and C. M. De Morales: “Volatile Chemical Cues Guide Host Locations and Host Selection by Parasitic Plants,” *Science* 313 (2006), 1965–76.

49 See Appel and Cocroft, “Plants Respond to Leaf Vibrations Caused by Insect Herbivore Chewing,” Abstract: “We asked whether acoustic energy generated by the feeding of insect herbivores was detected by plants. We report that the vibrations caused by insect feeding can elicit chemical defenses. *Arabidopsis thaliana* (L.) rosettes pre-treated with the vibrations caused by caterpillar feeding had higher levels of glucosinolate and anthocyanin defenses when subsequently fed upon by *Pieris rapae* (L.) caterpillars than did untreated plants. The plants also discriminated between the vibrations caused by chewing and those caused by wind or insect song. Plants thus respond to herbivore-generated vibrations in a selective and ecologically meaningful way.”

50 We are plainly not talking here about learning that requires an intellect. Nor are we talking about “learning” in the sense of adaptive changes that do not involve cognition, such as when one’s body is said to learn to adjust to a new mattress or to learn to adjust to seasonal changes in the length of day and night.

in the case of machine learning, for example, Spotify “learns” the kinds of songs a user likes based on those the user has previously liked or disliked. Thus, evidence must be given that like changes in activity or response are due to sensing.

If one has learned to do something, ordinarily one can do it at some later time. That means one has to remember how one does it. “Memory” is also a word with multiple meanings. In one sense, one can only remember things one knows. In another sense, a computer is said to have a memory because it encodes information that can subsequently be retrieved. But plainly computers do not know anything. How is one going to determine that a plant remembers something in the former sense when one is not sure that it knows anything to start with?

Do Plants Have Memory?

Chamovitz articulates typical claims concerning plant memory:

Plants definitely have several different forms of memory, just like people do. They have short term memory, immune memory and even transgenerational memory! I know this is a hard concept to grasp for some people, but if memory entails forming the memory (encoding information), retaining the memory (storing information), and recalling the memory (retrieving information), then plants definitely remember. For example[,] a Venus Fly Trap needs to have two of the hairs on its leaves touched by a bug in order to shut, so it remembers that the first one has been touched. But this only lasts about 20 seconds, and then it forgets.⁵¹

The main problem here is that the definition of memory applies even to computer memory (which does not involve life) and to immune system memory (which does not involve

51 Daniel Chamovitz, quoted in Cook, “Do Plants Think?”

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sensation), as well as to memory of something that has been sensed. Such a broad definition, embracing both sentient and non-sentient activities, is plainly unhelpful in determining whether plants have the sort of memory that depends on sensation.⁵² I mentioned previously how it is not uncommon for those who argue in favor of plant sentience to use words that have more than one meaning as though they had only one, as if such use of words offered support for plant sentience. We see this here in the case of Chamovitz, who fails to distinguish different meanings of the word “memory.”

Chamovitz claims that the Venus Fly Trap has a memory on the grounds that in order for one of its traps to shut, a second hair has to be touch within twenty seconds of a first hair being touched; if the second hair is touched later than that, the trap will not close. Thus, it seems that the plant must remember that a first hair has been touched in the span of the previous twenty seconds in order for it to close. However, Chomovitz himself provides an explanation for trap closing that does not invoke knowledge on the part of the plant:

The first touch of a hair activates an electric potential that radiates from cell to cell. This electric charge is stored as an increase in ion concentrations for a short time until it dissipates within about twenty seconds. But if a second action potential reaches the midrib within this time,

⁵² People who talk about plant memory sometimes tell us that the word “memory” names for them something that does not necessarily involve cognition: “Bruce et al. (200&) suggested that the use of the term ‘memory’ in plants implies a cognitive function. However, neither learning, memory nor indeed intelligence are words limited to biological, let alone, cognitive processes. For example, computers possess memory, and the more advanced ones can learn.” Anthony Trewavas, “What Is Plant Behaviour?”, *Plant, Cell & Environment*, 32, 6 (June 2009), 610. Those who use “memory” with so broad a meaning generally have little to say about whether “memory,” taken in the sense that does involve cognition, is found in plants.

the cumulative charge and ion concentrations pass the threshold and the trap closes.⁵³

Here is another example of a claim about plant “memory.” Chamovitz describes plant phytochrome as acting like a “light-activated switch: the red light turns on flowering; the far-red light turns it off.” He goes on to say: “On a more philosophical level, we can say that the plant remembers the last color it saw.” Chamovitz then continues:

Warren L. Butler and his colleagues had demonstrated that a single photoreceptor in plants was responsible for both the red and the far-red effects. . . In its simplest model, phytochrome is a light-activated switch. Red light activates phytochrome, turning it into a form primed to receive far-red light. Far-red light inactivates phytochrome, turning it into a form primed to receive red light.⁵⁴

The evidence Chamovitz provides does not support the claim that sensory memory is involved, but rather the opposite. A physical change happens that renders the phytochrome primed to receive one or the other types of red light, just as when one flips a light switch the switch is now primed to complete or break the circuit. The switch does not need to remember the last position it was in.

Habituation

Habituation is commonly presented as the lowest form of learning. It is typically defined as:

⁵³ Chamovitz, *What a Plant Knows*, 141. See also Alexander G. Volkov et al., “Kinetics and Mechanism of *Dionaea muscipula* Trap Closing,” *Plant Physiology* 146, 2 (Feb. 2008), 694–702.

⁵⁴ Chamovitz, *What a Plant Knows*, 19. Phytochrome is a photoreceptor that allows the plant to detect the length of nights, important for activities such as flowering.

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[T]he decrease of a response to a repeated eliciting stimulus that is not due to sensory adaptation or motor fatigue. Sensory adaptation (or neural adaptation) occurs when an organism can no longer detect the stimulus as efficiently as when first presented and motor fatigue occurs when an organism is able to detect the stimulus but can no longer respond efficiently. In contrast, habituation is a learned adaptation to the repeated presentation of a stimulus, not a reduction in sensory or motor ability.⁵⁵

Examples of sensory adaptation include how loud sounds eventually become less perceptible and odors less or no longer noticeable, due to changes in the sense organs. Examples of habituation include: a person situated under a flight pattern, though initially momentarily distracted by a plane flying overhead and also by the subsequent plane, eventually stops noticing the planes; and a person, upon hearing a tone repeated at intervals, eventually exhibits almost no skin conductance response.⁵⁶

Is Sensing Necessary for Habituation?

A number of experiments have been done that indicate that plants can be habituated. In one performed in 1965, mimosas stopped closing in response to water droplets falling on them, and it was not because they were tired, as they closed upon being touched.⁵⁷ In a more recent experiment, done in 2014, mimosas

⁵⁵ This Wikipedia definition succinctly sums up what can be found in more authoritative sources. See, for example, R. Thompson, "Habituation," in *International Encyclopedia of the Social & Behavioral Sciences*, ed. Neil J. Smelser and Paul B. Bates (Amsterdam: Elsevier Ltd., 2001), 6458. Note that I do not take up here sensitization, which is generally understood to be a phenomenon related to and the opposite of habituation.

⁵⁶ The skin conductance response refers to the skin becoming a better conductor of electricity.

⁵⁷ Holmes and Gruenberg (1965). Similar experiments using mechanical and electrical stimulation were done by Pfeffer (1873) and Bose (1906); recounted

were dropped 4–6 inches.⁵⁸ Initially they folded up their leaves, but after a number of repetitions, they stopped doing so. This was not due to fatigue, as shaking them resulted in them closing.⁵⁹

Those who favor the view that plants are sentient rightly point out that our habitual ways of thinking about plants can be an obstacle to considering objectively what plants are able to do. I think it is also the case, however, that it has become customary to regard habituation solely as a form of “true” learning (i.e., learning that involves sensing). However, just as there is a need to distinguish non-sentient machine learning from true learning, there is a need to distinguish non-sentient habituation from habituation that depends on sensing. This is because machines can act in a manner that fits the description of habituation, that is, they cease responding to inputs that are repeated. There are word processors that autocorrect words that they “perceive” as being misspelled. Some of them have a feature such that if one deletes two times a word that has been autocorrected and puts the originally typed word back in, the processor now perceives this word as part of its dictionary, and it no longer responds to it by correcting it.⁶⁰ It is as if it has gotten used to the word. There

by Charles I. Abramson and Ana M. Chicas-Mosier in “Learning in Plants: Lessons from *Mimosa pudica*,” *Frontiers in Psychology* 7 (March 2016), 2.

58 Monica Gagliano et al., “Experience Teaches Plants to Learn Faster and Forget Slower in Environments Where It Matters,” *Oecologia* 175, 1 (May 2014), 63–72.

59 Some question Gagliano et al.’s experiment; see Abramson and Chicas-Mosier: “The available data on *Mimosa* does not contain studies investigating a wide range of intertribal intervals. Until such data are available and correlated with underlying physiological data, it is difficult to separate sensory adaption from habituation.” “Learning in Plants,” 4. See also, Robert Biegler, “Insufficient Evidence for Habituation in *Mimosa pudica*. Response to Gagliano et al. (2014),” *Oecologia* 186, 1 (Jan. 2018), 33–35.

60 See Fleksy Team, “How to make your dictionary auto-learn words?” March 23, 2019, <https://fleksy.zendesk.com/hc/en-us/articles/360028744191-How-to-make-your-dictionary-auto-learn-words->. Note that there is no reason one could not program the computer to require three or more changes on the

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are also robots that have been programmed to “habituate.” They cease responding to thing that they repeatedly encounter and turn to novel things.⁶¹ Thus, a decreased response to a repeated stimulus by a plant does not show that the plant senses.

From the point of view of finality, a reaction triggered by a stimulus that is biologically unimportant is a waste of energy regardless of whether the reaction is to something sensed or something merely detected. Thus, from this point of view, it is not surprising that something resembling habituation in animals would arise in non-sentient living things.

Here again the problem of appropriate vocabulary arises. “Habituate” is now used in an extended sense that applies to robots and other machines in a way similar to the extension of the word “memory.” While at one time the word “habituation” was used solely to name a form of true learning, there is now a need to distinguish a new meaning that applies to its unknowing machine counterpart. And then, to avoid confusing the plant’s reduced reaction to a repeated stimulus with similar changes on the part of a machine or an animal, we need to distinguish yet another meaning of “habituation.”

Associative Learning

Associative learning involves making a connection of sorts between two things, resulting in a new or improved behavior.

user’s part before it stopped responding by autocorrecting the new word.

⁶¹ See M.H. Lee et al., “Developmental learning for autonomous robots,” *Robotics and Autonomous Systems* 55, (2007), 753–54: “Habituation mechanisms are used to reduce excitation with repetition and time and so attention is attracted by novelty and decays with familiarity. This motivation mechanism automatically attempts to repeat actions that accompanied the most exciting stimuli until eventually attention shifts away when familiarity has been gained.” See also, Carolina Chang, “Using sensor habituation in mobile robots to reduce oscillatory movements in narrow corridors,” *IEEE Trans Neural Networks* 16, 6 (Nov. 2005), 1582–89.

It seems to be more likely to require knowledge than habituation, which only leads to a diminishment of a typical response. Associative learning is commonly divided into classical conditioning and operant conditioning.

Classical Conditioning

In classical conditioning an organism begins to expect the arrival of an unconditioned stimulus (that is, something that naturally elicits a certain response) upon presentation of a conditioned stimulus (i.e., something that does not naturally elicit a response). The classic case of this sort of conditioning is Pavlov's dogs that formed an association between a tone (CS) and the arrival of food (US), as witnessed by their salivating upon hearing the tone.

In the case of Pavlov's dogs, we know that dogs hear tones and that they remember things (for example, where their water dish is), so we recognize that the dog, upon hearing a tone repeatedly followed by the arrival of food, eventually associates the two. We take this as a model for classical conditioning. And so we tend to exclude *a priori* the idea that an organism could make associations between things that it merely detects, as opposed to senses and remembers.

Monica Gagliano et al. have conducted an experiment with plants that seems to show that they are capable of classical conditioning.⁶² A garden pea shoot was placed in a Y-shaped tube at the point where the top of the Y forks. A puff of air was

⁶² Monica Gagliano et al., "Learning by Association in Plants," *Scientific Reports* 6, no. 38427 (2016). In 2018, Barry Adelman did a review of conditioning experiments with plants. He found only six such experiments in the literature, two of which gave positive results and one mixed results. In the case of all three of these experiments, one of which was Gagliano et al.'s, Adelman finds reason to question the results. See Barry Adelman, "On the Conditioning of Plants: A Review of Experimental Evidence," *Perspectives on Behavior Science* 41 (2018), 431–46.

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used as the conditioned stimulus, as in a test prior to the main experiment it did not affect the direction of growth of any of the plants, as predicted by the last direction in which the plant had detected blue light. Blue light was the unconditioned stimulus, as plants grow in the direction of blue light. The plants were then divided into two groups. The puff of air was then delivered from one fork or the other, and this was followed by a burst of blue light either from the same fork in the case of one group or from the other fork in the case of the second group. After a number of repetitions, the plants were tested. The results were that 62% that had received a puff of air followed by blue light in the same tube, when given a puff of air, grew in that tube, and 69% of those that had received the blue light in the opposite tube, when given a puff of air, grew in the opposite tube, as is consistent with classical conditioning.⁶³

There are two problems with Gagliano et al.'s experiment. The first concerns the experiment itself, and the second concerns the interpretation of the results.

Kasey Markel questions the way that the experiment was done in a 2020 publication in which he recounts his unsuccessful attempt to replicate Gagliano et al.'s findings. According to Markel, a major problem with the experiment was that

Gagliano *et al.* reported that in the absence of fan stimuli, pea plants always grow towards the last one-hour presentation of light, whereas we find their growth to be only slightly biased towards the last presentation of light.⁶⁴

Markel acknowledges that there is a remote chance

63 Gagliano et al., "Learning by Association in Plants" (2016).

64 Kasey Markel, "Pavlov's Pea Plants? Not So Fast: An Attempted Replication of Gagliano *et al.* (December 2016)," bioRxiv preprint doi: <https://doi.org/10.1101/2020.04.05.026823>, posted April 6, 2020. Note that his publication has not undergone peer review.

this was due to Gagliano et al. using a different strain of peas. Another problem Markel notes is that 40% of plants have to be discounted, either because by the morning of the test they already had grown into one tube before being exposed to the fan or because they had not grown into either tube the day after the test.

Lincoln Taiz et al. also question Gagliano et al.'s control: "In our view a 100% response to the previous day's US is not expected."⁶⁵ They go on to note that if the control response is not 100%, then the "significance of the 65% response to the CS would have been greatly diminished, although not necessarily abolished."⁶⁶

Barry Adelman, in his 2018 review of conditioning experiments with plants, also questions Gagliano et al.'s experimental procedure, as well as noting that the experiment has not been replicated.⁶⁷ Adelman's overall assessment of the conditioning experiments that have been done is:

At best we have a "maybe," a few demonstrations, but more replications and extensions are needed, as well as better indications of the conditions under which respondent

65 Lincoln Taiz et al., "Plants Neither Possess nor Require Consciousness," *Trends in Plant Science* 24 (2019), 680. See *ibid.*: "The growing tip typically undergoes strong circumnutation in the dark, which weakens in light or during phototropic bending. In the dark, circumnutation increases and the tip gradually reverts to vertical growth due to the effects of gravitropism. The presence of the Y-maze adds another level of complexity to the experiment. If the shoot tip happens to enter the arm of the Y-maze where light was last presented during the previous day's training session, it would be mechanically prevented from reverting to vertical growth and would therefore resume growth the next day in the same arm. In this case, the control plants would appear to grow toward the arm where light had previously been presented, whereas in the absence of the Y-maze the control would grow randomly."

66 *Ibid.*

67 See Adelman, "On the Conditioning of Plants," 439.

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conditioning does and does not occur in plants.⁶⁸

As to the interpretation of the pea experiment's results, we tend to assume that the plants felt the puffs of air, saw the blue light, and remembered, if unconsciously, that the former is associated with the arrival of the latter, similar to what happened with Pavlov's dogs and the bell followed by the delivery of food. It is especially tempting to do so, given the fact we cannot explain in detail how this altered response occurs in plants. Yet, in the absence of a reason to hold that the plants do not merely detect the pressure of the puff and detect the colored light, this assumption is ultimately just that—an assumption. What the plant does resembles learning, but there is no reason to say that it is true learning.

Also relevant here is the fact that rats with spinal cords severed from their brains exhibit behavior typical of classical conditioning. As Jon Mallatt et al. explain:

During the training, the mild shock to the leg [conditioned stimulus] is given just before an antinociceptive shock to the tail [unconditioned stimulus], the latter being a shock that naturally diminishes tail flick in response to the focused heat. With learning, the leg shock diminishes this tail flick when given alone.⁶⁹

In other words, in the trained animal, an application of the conditioned stimulus, the mild leg shock, results in the response typical of the unconditioned stimulus, the antinociceptive shock; namely, tail flick is diminished without the unconditioned stimulus being applied. Since the spinal cord is disconnected from the brain, the rat is not aware of the leg shock or the tail shock. Thus, true learning is not occurring, despite the appearance

68 Ibid.

69 Mallatt et al., "Debunking a Myth: Plant Consciousness," 468.

thereof. This provides a further reason against concluding that plants sense solely on the grounds that they act in a manner consistent with classical conditioning.

In addition, the fact that robots have been constructed that “learn” in the manner of classical conditioning shows that what appears to be a form of true learning can occur in the absence of sentience.⁷⁰

Operant Conditioning

Operant conditioning occurs when an organism’s behavior is shaped by punishment or reward. As yet there have been no claims of operant conditioning in plants. Indeed, it is hard to imagine how such conditioning could occur.⁷¹ A pigeon learns

70 Ben Kröse and Joris van Dam, “Neural Vehicles,” in *Neural Systems for Robotics*, ed. Omid Omidvar and Patrick van der Smagt (San Diego: Academic Press, 1997), 280: “The learning method is based on a model of ‘classical conditioning,’ a well-studied phenomenon in the behavioral sciences. Assuming that the system is capable of triggering a ‘unconditioned’ response (UR) to stimuli from a basic set of unconditioned stimuli (US), the learning methods allow the system to develop associations between the set of USs and other stimuli which have no ‘genetically’ preassigned value (conditioned stimuli, CS). The learning method was successfully applied to an obstacle avoidance task, where the US-UR reflex consisted of avoidance movements upon collision detection, and the CS was the output of a range sensor. After about 300 steps of the system, the avoidance movements were totally induced by the range sensor.” See also Andreas Bühlmeier and Gerhard Manteuffel, “Operant Conditioning in Robots,” in *Neural Systems for Robotics*, 199: “This learning paradigm, called classical conditioning, can be explained by one simple adaptive element and one delay element. The reflex is formed by a fixed US input weight, and conditioning occurs when the delayed CS coincides with the US. Figure 7.2 shows a simple circuit to explain the basic effect of conditioning with one fixed and one modifiable synapse (w).” See also 213–16.

71 See Abramson, “Learning in Plants,” 2: “If a researcher is interested in studying operant conditioning, for example, a reward must be found that can be administered quickly, does not produce rapid satiation, and is effective over several presentations. Many learning paradigms require an established sequence of behavior that requires the delivery of time sensitive feedback.

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through trial and error to press a certain sequence of buttons to get a grain reward and a dog learns to shake hands through “shaping,” that is, being rewarded for successive approximations of the desired behavior. How could such training regimes be applied to a plant? In any case, if plants were observed to act in a manner consistent with operant conditioning, we must keep in mind that there are many papers in the field of robotics reporting the successful production of robots that are able to “learn” in a manner resembling operant condition.⁷² If operant conditioning can be mimicked by non-living things, it would not be surprising that non-sentient living things can do so as well.

For example, one of the basic issues in operant conditioning is how to reward a behavior that does not naturally occur. One strategy is to reward successive approximations of the target response. This process, known as shaping, requires a reward to be administered at a precise time for producing a small piece of the desired action. Over time, the successive approximation comes together to produce the final outcomes. For this type of training, plants present unique challenges because they often appear to be inactive, making small behavioral changes difficult to see and relate to consequence. . . . Before a learning experiment can be designed, researchers must know what will motivate a plant and for how long.”

72 Here is a sample of the fairly extensive literature on operant conditioning in robots: Xiaoping Zhang et al., “A Self-Learning Sensorimotor Model Based on Operant Conditioning Theory,” *2015 IEEE Advanced Information Technology, Electronic and Automation Control Conference (IAEAC)*, doi: 10.1109/IAEAC.2015.7428618; the robot they made learned how to shake hands. A. Cyr et al., “Operant Conditioning: A Minimal Components Requirement in Artificial Spiking Neurons Designed for Bio-Inspired Robot’s Controller,” *Frontiers in Neurobotics*, doi: 10.3389/fnbot.2014.00021 (eCollection 2014). P. Gaudiano et al., “Adaptive Obstacle Avoidance With a Neural Network for Operant Conditioning: Experiments With Real Robots,” *Proceedings 1997 IEEE International Symposium on Computational Intelligence in Robotics and Automation CIRA ’97: Towards New Computational Principles for Robotics and Automation*, doi: 10.1109/CIRA.1997.613832. Cyr and Gaudiano studied the neural systems that underpin learning in organisms and took their inspiration from them.

*An Argument in Favor of Plant Sentience
Drawn from Motile Unicellular Organisms*

Arthur S. Reber offers an argument in favor of plant sentience, after which he goes on to respond to it. He first posits that evolution is generally conservative; once a feature that evolves proves to be adaptive, it is rarely lost.⁷³ He then points out that there is reason to think that motile bacteria are sentient. He concludes, then, that plants too should be sentient, given bacteria are their ancestors and sentience is adaptive.

Reber goes on to respond to this argument:

But it [sentience] is metabolically expensive; there's a lot of biological cost invested in being able to key in on, represent, and react to these many features of the environment. If a species lays down roots, abandons its motile way, it may just find that this aspect of existence is no longer worth the biological effort. It might turn out to be more effective, from a natural-selection point of view, to focus instead on other forms and functions, ones that have a more immediate evolutionary benefit.⁷⁴

Unlike Reber, I am agnostic as to whether any motile unicellular organisms are sentient (and regard the question as very difficult to answer). However, when it comes to understanding plants' activities, no matter what activity I consider, I find either that researchers have discovered an adequate explanation in terms of biochemistry or that that they are seeking that kind

⁷³ It is debatable whether evolution is generally conservative. There is no doubt that traits are sometimes lost, for example, sight in animals that are cave-dwelling. It may be the case that loss is less common than retention of features but is still not rare. In any case, Reber's counterargument turns on the fact that traits are lost when they are no longer affording an advantage to the organism.

⁷⁴ Arthur S. Reber, "Sentient Plants? Nervous Minds?" *Animal Sentience* 11, 17 (2018), 2.

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of explanation. Regardless whether sentience is an ability that plants lost or one that they never had, the evidence presented throughout this paper indicates that they do not possess it.

Conclusion

I rest my case that plants, at least most of them, lack sentience.⁷⁵ Most of the life activities that go on in us without sentience and which would not be carried on any better with sentience are reasonably thought to go on in plants as well in a non-sentient manner.⁷⁶ These activities include nutrition, gamete production, adaptation, resisting foreign invaders, and homeostasis. While clearly I could not cover in detail every activity that plants

⁷⁵ My thesis that plants and animals are fundamentally different kinds of living things would not be affected if it turned out that we have misclassified a given species of living thing, for example, if a species of carnivorous plant was shown to be an animal.

⁷⁶ I have been arguing that plants ensure their survival exclusively through biochemistry and not by also sensing. It is interesting that the number of genes that humans have is estimated to be between 20,000 and 25,000, whereas the number of genes the average plant has is estimated to be 32,000 (<https://www.crops.org/news/science-news/exploring-first-50-sequenced-plant-genomes/>). When it was discovered that *Daphnia* (water fleas) have 31,000 genes, one reason proposed to explain why they have so many more than humans is that *Daphnia* live in a changeable aquatic environment, one that they cannot really escape from, given they do not swim that fast, and a large genome affords them a wide variety of biochemical ways of dealing with changes in the water. By contrast, most animals can deal with changes in their environment by simply moving elsewhere, and so they are not so reliant on biochemical strategies by which they alter themselves. Plants are even more restricted in their ability to move elsewhere than are *Daphnia*, so it makes sense that they deal with environmental challenges using a wide array of biochemical responses. Consequently, it is not surprising that so many plants have a large number of genes, as the latter are needed for these biochemical responses. While it is not the case that every plant has more genes than every animal, for example, the model plant *Arabidopsis thaliana* has ~25,000 genes, whereas the puffer fish has ~35,000, still the average plant has a strikingly large number of genes when compared to many animals.

perform, relatively few activities suggest that they need sensation to account for them. The two main ones that do are, first, directional responses and seasonal responses, which make it seem that plants have to know in what direction to grow or change or when to do something, such as flower; and second, changes in the plants' responses to external stimuli, which makes it seem that they learn.

As for the first, while it is the case that scientists have yet to discover the causes of many directional activities in plants, such as their roots growing toward water, in the cases where such activities are fairly well understood, they are not explained in terms of awareness on the part of the plant. As we have seen, directional growth toward light results from photo-biochemical changes that take place in the absence of an organ, and that also would not go on any better if the plant were to be aware of them. Similarly, the hypersensitive response, which occurs in the part of the plant that is attacked by pathogens, is due to molecules from pathogens binding to plant receptors, thereby causing further biochemical reactions in the plant, and is not due to the plant tasting or otherwise being aware of the pathogen molecules. While I did not cover plants' seasonal changes, the photo-biochemical explanations given for them can be readily found in the literature.⁷⁷

As for the second potential exception, putative learning, as I have shown, even non-living things can mimic the various forms of learning, from habituation to the various forms of associative learning. For this reason, pointing to a new or better behavior that a plant displays does not offer sufficient justification for the claim that it senses. Moreover, since learning

⁷⁷ See Stephen D. Jackson, "Plant Responses to Photoperiod," *New Phytologist* 181 (2008), 517–31 and Y. H. Song, J. S. Shim, H. A. Kinmonth-Schultz, and T. Imaizumi, "Photoperiodic Flowering: Time Measurement Mechanisms in Leaves," *Annual Review of Plant Biology* 66 (2015), 441–64.

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depends on sensing, if there is no evidence to begin with that the plant senses, this is a reason to doubt that it engages in true learning when it appears to do so.

Those claiming that plants are sentient typically make a variety of false assumptions, probably the most common of which is that if a living thing responds in a teleological way to something in its environment (for example, it parasitizes another plant in response to volatiles produced by that plant), it must sense that thing.⁷⁸ People are especially prone to make this assumption when what the plant responds to has a quality we sense, such as an odor.

Certain usages of language give the false appearance of supporting the notion that plants are sentient.⁷⁹ Words such as “sense” and “memory,” which originally named ways of knowing in animals, have been transferred to also name things that non-sentient beings do, based on a resemblance. Consequently, using such words without distinguishing their meanings leads

78 Rafał Kupczak, for example, supports his claim that plants are sentient in this manner: “As shown above, in recent years extremely selective and efficient orientation processes have been discovered in plants. Their tendency to orientate in the environment results from the construction of specific structures (sensors) that monitor changes in certain selected parameters of the environment.” “Selected Aspects of Biophilosophical Controversies in Complex Plant Behaviour Research,” *Studia Philosophiae Christianae* 53, 2 (2017), 137–38. One wonders if Kupczak is not also misled by the lack of a precise term for the receptors involved in plants’ selective and ecologically meaningful responses.

79 A number of plant biologists note how those promoting the notion that plants are sentient co-opt language typically used for animals to further their purposes. For example, Taiz et al. note: “In any case, complexity per se is no proof for nervous systems. Again, cognition-related terms are used to suggest the existence of neuronal-like representations in plants. However, the use of such terms is not based on proven cognitive processes, but are at best mere metaphors similar to the term ‘memory cells’ in immunology, which compares adaptive immunity to a learning process but does not seriously claim that immune systems have consciousness, cognition, or sentience.” “Reply to Trewavas et al.,” 218.

to question-begging assertions concerning plant sentience. The lack of words for activities that resemble in certain ways the activities both of animals and of machines, but are in fact plant-specific, exacerbates this problem.⁸⁰

80 See Taiz et al., “Plants Neither Possess nor Require Consciousness,” 685–86: “Why is anthropomorphism resurgent in biology today? In the most extreme case, all forms of life, even prokaryotes, are said to possess consciousness. This new wave of romantic biology appears to be inspired by a justifiable concern about humanity’s continuing ecological degradation of the biosphere. . . . PN (plant neurology) has its roots in plant ecology and its philosophical offshoot, the Gaia hypothesis, rather than in plant physiology, and an ethical perspective permeates its intellectual foundation.”

**RE-TURNING THE WHOLE SOUL:
HOW BOETHIUS COMES TO TRULY KNOW HIMSELF
IN *THE CONSOLATION OF PHILOSOPHY***

Andrew Seeley

The drama of a philosophical dialogue is neglected at one's own peril. Failing to attend to the blush of Thrasymachus or the hot-headedness of Polus in one's haste to get the teaching of the *Republic* or the *Gorgias* leads to missing not only the teaching itself but also the contributions to the life of wisdom made by both the drama and the teaching. *The Consolation of Philosophy* is one of the most dramatic works to be found in the ancient corpus. Composed by Boethius when facing death for having lived a life devoted to philosophy, he presents himself¹ as running the emotional gamut from self-indulgent wailing to anger against the divine order to joy and wonder at the intricacy of argument to the quiet calm of contemplation of the mind of God. His guide is not one of the wise but Philosophy herself, who assumes

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1 This essay focuses exclusively on the character of Boethius in the story of the *Consolation*. No attempt is made to discern the author through the character. However, the strong Platonic motif does imply an interesting question: did Boethius the imprisoned author find no consolation in his Aristotelian studies? Or did he write the *Consolation* as an instance of the agreement of Aristotle and Plato?

RE-TURNING THE WHOLE SOUL

the role of a physician of souls,² employing all the wisdom of the ancients to heal one of her devoted sons.

The drama of a real devotee of philosophy on the verge of losing his soul is unique among dialogues. True philosophers are heroic in the face of suffering and adversity, as Lady Philosophy recounts to Boethius.

There's no real danger here. . . . He's forgotten who he is for a moment. He'll easily remember again soon—that is, if he ever knew me.³

She reminds him that the company of the wise and virtuous, to which he thought he belonged, included many martyr philosophers, such as Socrates and Seneca. This does not have the effect she expected; Boethius breaks down into tears again. So she provokes him to speak his heart so that she might determine how bad off he is. Boethius begins by accusing Fortune of betraying him and ends by implicitly accusing God of neglecting human affairs. He even complains against Philosophy herself.

Weren't you the one who hallowed the words of Plato when he claimed that the Republic would be blessed if lovers of wisdom ruled it or if its rulers happened to love wisdom? You use the words of that very man to argue that this is why the wise must take a part in public affairs. . . . And so I followed this advice and chose to apply to public affairs what I had learned from you in our quiet hours together.⁴

2 For more on this theme, see Jeffrey S. Lehman, "Lady Philosophy as Physician," in *The Consolation of Philosophy: Ignatius Critical Editions*, ed. and trans. Scott Goins and Barbara H. Wyman (San Francisco: Ignatius Press, 2012), 187–211.

3 *Consolation of Philosophy*, Bk. I, prose 2, p. 10. All quotations and citations (following the convention of Book number, P or M for Prose or Metrum, and page reference) are from the Goins and Wyman translation.

4 *Consolation* I.P.4.16.

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These rants reveal that Boethius has some blindness about himself. He believes that Philosophy “planted deep inside me, [has] driven from the depths of my heart any desire for transitory things,” yet he cannot bear the loss of reputation brought about by false accusations, especially when these happen under the forms of legal justice.⁵

This leads the reader, as an eavesdropper on the conversation, to wonder whether Boethius, though an intimate devotee of Philosophy from his youth, had never really known her. Philosophy suspects that he did not fully internalize her teaching in his youth,⁶ perhaps mistaking book learning for wisdom. Though Boethius pitifully reminds her of the times in “our library,” where she dwelt as in a sanctuary,⁷ Philosophy says: “I don’t miss the walls of your library, decorated with their glass and ivory, so much as I miss my seat of honor in your mind, where I gathered together not books, but the things that give books their value.”⁸ Boethius’s answers to her questions confirm her suspicion and reveal significant gaps in his understanding, the most important of which is his failure to grasp who he is as a human being.

“Can you tell me, then, what a man is?”

“Are you asking if I know that I am a rational and mortal creature? I know it and confess it.”

She then replied, “Is there nothing more that you can add?”

“Nothing.”

⁵ Boethius dwells for some time on the evils of having been condemned through the legal process: “I would say that this is the ultimate burden of misfortune: a wretched man is believed to deserve all that he suffers, even when the charge against him has been made up.” I.P.4.22.

⁶ His tears prompt her to ask, “Have my words sunk into your heart? Or are you simply ‘like the ass that heareth the lyre?’” I.4.15. His tearful rant suggests that they have not.

⁷ *Consolation* I.P.4.16.

⁸ *Consolation* I.P.5.26.

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“Now I know the other, in fact the greatest, cause of your disease: you no longer know what you are.”⁹

Fellow devotees of Philosophy might wonder why Boethius’s answer so alarms the Lady physician. “Rational animal” is such a commonplace definition of man that it is hard to pin down its source.¹⁰ The addition of “mortal” is straight from Porphyry’s *Isagoge*, where the complete definition is given as a paradigm of using genus and differences to arrive at a definition.¹¹ Yet Philosophy seems to see it as a dangerous example of valuing book learning over intimate knowledge of things themselves.¹² She herself never offers an alternative or complementary

9 *Consolation* I.P6.28.

10 It is not used by Aristotle, though some claims of his might have led to the expression. See Christian Kietzmann, “The Definition of What It Is to Be Human,” in Geert Keil and Nora Kreft, eds., *Aristotle’s Anthropology* (Cambridge: Cambridge University Press, 2019), 25–43. Kietzmann makes an even more sweeping claim: “But he nowhere defines the essence of what it is to be human in these terms. What is more, Aristotle’s abundant remarks about human nature are scattered throughout his texts, and he offers no systematic treatise on human beings.” *Ibid.*, 25. Kietzmann thinks the expression, “*zoon logon echon*,” in *Politics* I.2 should be understood as “an animal having speech,” and is not presented as a fundamental definition, any more than is “*zoon oikonomikon*” in *Nicomachean Ethics* VII.10.

11 Porphyry, *Isagoge*, “On difference,” n. 50: “If we are asked ‘what man is?’ it is proper to say ‘an animal.’ But when we inquire ‘what manner of animal?’ the proper reply we shall give is ‘a rational and mortal one.’” *Five Texts on the Medieval Problem of Universals: Porphyry, Boethius, Abelard, Duns Scotus, Ockham*, ed. and trans. Paul Vincent Spade (Indianapolis: Hackett Publishing, 1994), 9.

12 See *Phaedrus*, 229e: “But I have no time for such things; and the reason, my friend, is this. I am still unable, as the Delphic inscription orders, to know myself; and it really seems to me ridiculous to look into other things before I have understood that. That is why I do not concern myself with them. I accept what is generally believed and, as I was just saying, I look not into them but into my own self: Am I a beast more complicated and savage than Typhon, or am I a tamer, simpler animal with a share in a divine and gentle nature?” “Phaedrus,” trans. Alexander Nehamas and Paul Woodruff, in Plato, *Complete Works*, ed. John M. Cooper (Indianapolis: Hackett Publishing, 1997).

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formula, beyond one introduced near the end of the work simply as an example of the kind of definition that reason might give: “For reason is that which defines the universal nature of things it has conceived in such a way as this: ‘Man is a rational animal with two legs.’”¹³

Why did Lady Philosophy react so strongly to Boethius’s answer? How has Boethius’s understanding of man contributed to his miserable state? What does he come to understand about man? What effect does that have on his healing?

Know Thyself

Before addressing these questions, we should consider how Boethius came to be in a state where he was an intimate of Philosophy and yet never really knew her. Boethius gives several clues about his philosophical life. In his library, he was taught “the wisdom of God and man alike”; he pursued in a particular way “nature’s secrets,” “the course of the stars,” and “how to live” an ethical life inspired by astronomical knowledge of the divine movements of the heavenly bodies.¹⁴ He mentions that one of

¹³ This is a conflation of one of Aristotle’s favorite examples of a definition of man with the commonplace; see Kietzmann, “The Definition of What It Is to Be Human,” 27.

¹⁴ See Ptolemy, who lauds astronomy’s moral effects in *Almagest* I.1: “And indeed this same discipline would more than any other prepare understanding persons with respect to nobleness of actions and character by means of the sameness, good order, due proportion, and simple directness contemplated in divine things, making its followers lovers of that divine beauty, and making it habitual in them, and as it were natural, a like condition of the soul.” Ptolemy, *The Almagest*, trans. R. Catesby Taliaferro in *Great Books of the Western World*, vol. 15, *Ptolemy, Copernicus, Kepler* (Chicago: Encyclopedia Britannica, 1952), 6. Ptolemy here seems to echo the *Timaeus*, 90c: “The motions that have an affinity to the divine part within us are the thoughts and revolutions of the universe. . . . And when this conformity is complete, we shall have achieved our goal: that most excellent life offered to mankind by the gods, both now and forevermore.” “*Timaeus*,” trans. Donald J. Zeyl, in the Cooper edition of the *Complete Works*; see also 88d. It is striking that *Timaeus* does not see the need

his books, the *Republic*, had led him to put aside a life devoted to philosophical reading and discussion that he might, as one of the wise, “take a part in public affairs, so the helm of state won’t fall to wicked and criminal men, who would bring ruin and destruction to the good.”¹⁵

But perhaps he has not read the *Republic* so well.¹⁶ We get a different idea of Boethius’s state at the time of his entrance to public life by considering the details of the education of the philosopher in Book VII of the *Republic*.¹⁷ Book VII is divided into three parts: the intellectual journey of the philosopher’s soul seen through the allegory of the cave (514a–21b); the account of the studies that will prepare the philosopher for the sight of the Good (521c–35a); and finally the determination of who shall be chosen for those studies and the order in which they will be undertaken, correlated with the ages of the learner (535a–41b). In the last two sections, Socrates proposes that mathematical studies (which Boethius himself named the “Quadrivium”) will provide the beginning for leading the most promising among the guardian class out of the state of intellectual shadows which the cave allegory presented as natural to human beings.¹⁸

to elevate the mind to the vision of the Good. Nor had he noticed that Socrates left the philosopher king’s education out of his recounting of the *Republic* at the beginning of the *Timaeus* (18a, 19a). For a much more subtle reading of *Timaeus*’s response, see William Welliver, *Character, Plot and Thought in Plato’s Timaeus-Critias*, *Philosophia Antiqua*, vol. 32 (Leiden: Brill, 1977).

¹⁵ *Consolation* I.P4.16.

¹⁶ This does not seem to be at all true of Boethius the author. The *Consolation* seems infused by a close, deep reading of at least portions of the *Republic*.

¹⁷ For more of my thoughts on the process of turning the soul in the *Republic*, see “Turning the Whole Soul: The Moral Journey of the Philosophic Nature in Plato’s *Republic*,” <https://catholicliberaleducation.wordpress.com/2018/09/25/turning-the-whole-soul-the-moral-journey-of-the-philosophic-nature-in-platos-republic/>.

¹⁸ Socrates argues that the education presented in Books II & III is insufficient for inspiring and directing philosophical souls, “lead[ing] them up to the light, just as some men are said to have gone from Hades up to the gods” (521c), for

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While still in their youth, these chosen should “play” with mathematics, their guides allowing them to haphazardly follow whatever questions arouse wonder, delight, eagerness for argument and determination.¹⁹ Beginning at the age of 20 or so, these studies should be taken up in a more disciplined manner, one that results in proficiency in each of the disciplines, but more importantly in “an overview which reveals the kinship of these studies with one another and with the nature of that which is.”²⁰ The next stage, which begins around age 30, involves being tested by dialectic to determine “who is able to release himself from the eyes and the rest of sense and go to that which is in itself and accompanies truth.” Socrates urges the need to allow only the most “orderly and stable natures” to proceed to this stage.²¹ They will then, from ages 30–35, be trained in “intellectual gymnastics” under the guidance of masters of dialectic, in a way that leads them to question their hypotheses, and perhaps the hypotheses that underlie the entire way of life of their city.²²

Even at this stage, the philosophical soul is not yet ready

“[Music] educated the guardians through habits, transmitting by harmony a certain harmoniousness, not knowledge. . . . But as for a study directed toward something of the sort you are now seeking, there was nothing of the kind” (522b). On the other hand, arithmetic will be useful: “And thus the study of the one would be among those apt to lead and turn around toward the contemplation of what is” (525a). All translations of the *Republic* will follow *The Republic of Plato*, trans. Allan Bloom (New York: Basic Books, 1968).

19 *Republic* VII, 536d. Theaetetus, sketched as an ideal math student ready to be roused to philosophy, first encounters Socrates while exploring math hypotheses. See *Theaetetus*, 147dff, 144a.

20 *Republic* VII, 537c.

21 *Republic* VII, 539d. Socrates spends several pages describing the disasters that result to the city and to philosophy from introducing “arguments” to those who are too young or poorly disposed. He had earlier (536b) chided himself for getting excessively passionate about such matters.

22 See 533c: “Only the dialectical way of inquiry proceeds in this direction, destroying the hypotheses, to the beginning itself in order to make it secure.” See also 538c–e.

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to complete the dialectical journey, which culminates in a “grasp by intellection itself [of] that which is good itself.”²³ They have a long time to wait, for Socrates says that they should return to “the cave,” that is, the city “founded” by Socrates and his interlocutors, to spend 15 years in public administration. Socrates emphasizes the importance of testing at every stage of education; administrative duties “in the cave” provide another stage of testing for the budding philosophers:

Now, after this, they’ll have to go down into that cave again for you, and they must be compelled to rule in the affairs of war and all the offices suitable for young men, so that they won’t be behind the others in experience. And here, too, they must still be tested whether they will stand firm or give way when pulled in all directions.²⁴

Socrates does not elaborate on why they will be pulled in all directions. In the allegory portion of Book VII, he had said that the one returning to the cave would have great difficulty at first in forming proper judgments about the shadows.²⁵ Having learned to raise searching questions about fundamental assumptions in a dialectical way, the budding philosophers must learn to see the shadows and images of the good that hold sway in the city for what they are. Even as they see these deficiencies, they must show that they can be both loyal to what they have glimpsed of the intellectual life and still serve the city without tearing it to shreds out of ambition or disgust. Only when matured through this intellectual and practical experience are they ready (at the age of 50) to enjoy the leisure in which they will at last ascend dialectically to the vision of the good.²⁶

²³ *Republic* VII, 532a.

²⁴ *Republic* VII, 539e.

²⁵ See *Republic* VII, 516e, 517d.

²⁶ See *Republic* VII, 540a.

Socrates would no doubt have judged that Boethius entered far too early into political life. He was in his early twenties when he earned the friendship of Theodoric and entered into civic life; he then became consul in his early thirties.²⁷ According to his own account,²⁸ he had mastered astronomy, the culmination of the Quadrivium, and had seriously considered natural science before entering political life, but had apparently not entered into the dialectical ascent, nor possibly intellectual gymnastics.²⁹ Philosophy's diagnostic questions in Book I revealed two major deficiencies in Boethius's understanding that seem to be the result of his deficient training.³⁰ Boethius was not only ignorant of his nature, but, though he knew that God governed the natural world, he did not know that God brings about cosmic harmony through love for the Good implanted within the natures of all creatures.³¹ Astronomy, prescinding as it does from considerations of the Good, leaves its disciples ignorant of the source and goal of the harmony.

It is not so surprising that Boethius failed the test. He does not seem to have been ready to recognize for what they are the shadows and images of the good as he found them lived out in a living human society. He had difficulty discerning how they fall short of, and even distort, the truly good.³² The objects of the

27 See Helen Barrett, *Boethius: Some Aspects of His Times and Work* (Cambridge: Cambridge University Press, 2014 [originally published in 1940]), 45.

28 See *Consolation* I.P4.16.

29 Socrates does not make an exact correlation between the stages of study and the allegorical description. At what point do the philosophically-minded souls get out of the cave?

30 *Consolation* I.P6.28.

31 See, for example, III.P12.102: "Since God is rightly believed to steer all things with the helm of goodness, and all these very things, as I taught you, hurry towards the Good by natural inclination." She had earlier (III.P12.99) called this the "very cornerstone of truth."

32 So the legal forms of justice are very important to him. He is aghast that God could have let him be legally condemned as a traitor to Rome.

desires of ordinary folks—wealth, offices, fame—did not corrupt him, but they did enter into his understanding of justice and injustice. Boethius felt he had suffered a great misfortune and had been betrayed by Fortune and neglected by God, when such things were taken from him.

The prisoners in the cave cannot see themselves, and it is not clear at what point in the philosophical ascent they come to know themselves. Boethius reveals that he had not understood himself when he implies that he was already virtuous when entering political life. In Book II, Boethius professes that he had never been tempted by “earthly things” but only sought opportunities “to do the things that would keep my virtue from growing old and stale.”³³ Philosophy replies that excellence in mind without the perfection of virtue remains susceptible to the love of glory and fame for “great services done for the state.”³⁴ Could Boethius’s false reliance on a formula expressing the definition of man have contributed to his self-ignorance?

Glimpses Along the Way

Although Lady Philosophy does not propose an alternative definition of man, she does say a number of things that help to elevate his self-understanding. In Book II, while speaking rhetorically to sever him from attachment to Fortune and the goods of fortune, Lady Philosophy reminds Boethius that in virtue of his reason and mind (*mens*) he is God-like,³⁵ and so it is unfitting

33 *Consolation* II.P7.55.

34 This was especially true for Romans. See Augustine, *City of God*, Book V.

35 Boethius indicated that these words were not foreign to him when he was defending himself against the accusation of sacrilege: “It would not have been fitting for me to look for the aid of inferior spirits, when you had endowed me with virtue [*excellentiam*] in order to make me become like God.” I.P4.22. Yet he says this without knowing what he is, or how God orders the world, or to what end.

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for him to care for material possessions.³⁶ This becomes a recurring theme through the rest of the *Consolation*. Awareness that the mind will not perish but be freed from its earthly prison naturally leads to a contempt for glory that Boethius was lacking.³⁷

Lady Philosophy leads him by argument in Book III to recognize that all goods sought separately are shadows or at best images of what will bring real happiness, which can only be found unified in the simplicity of God.³⁸ She draws out the corollary that man can only become happy by becoming a god by participation.³⁹ She reiterates this in Book IV, explaining that virtue is its own reward because it fulfills human nature, makes a man good, and therefore a god.⁴⁰ To make oneself wicked is to cease to be human, for the natural drive to share in divinity is frustrated and willfully opposed.

But what does it mean to be a god by participation? How is one to possess the blessedness which lies in God alone? Without mentioning it, Philosophy begins to imply some answers to these questions in the second part of Book IV, when she discusses the difference between Fate and Providence. Fate is the working out in creation of Providence, the Divine Plan (*ratio*) for creation as it exists in the Divine Mind. She seemingly goes out of her way to make the point that some things can escape Fate. She uses the image of concentric circles spinning around a common center to express this.

The innermost circle moves towards the simplicity of the center, and serves as a sort of axis for the others located beyond it, around which they will turn in a larger orbit . . .
If anything is joined with the middle and has a share in it,

36 *Consolation* II.P5.49.

37 *Consolation* II.P7.59.

38 See *Consolation* III.P9.82, 85.

39 *Consolation* III.P10.92.

40 *Consolation* IV.P3.118–19.

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it is forced into simplicity and ceases to be spread out and dispersed. . . In a similar way, what departs further from the Supreme Mind is wound up in greater links of Fate, and the more a thing seeks the center of things, the freer it is from this Fate.⁴¹

This suggests that participating in the Divine comes from being as closely united as possible to the Divine Mind. How is this accomplished? She begins to suggest an answer immediately by introducing the distinction between reason and understanding as part of a composite analogy to help illustrate the difference between Fate and Providence:

Therefore, as reasoning differs from understanding,⁴² as that which is produced differs from that which is, as time differs from eternity, and likewise a circle differs from its center, so the moving course of Fate differs from the unchanging simplicity of Providence.⁴³

In Book V, Philosophy develops the comparison between reason and understanding, in order to explain the mode of divine cognition.⁴⁴ First she looks at the distinction among the four cognitive powers—sense, imagination, reason, and understanding—identifying their proper objects. She denies the lower powers can know the objects of the higher ones, but the higher powers are aware of and can use the lower powers. Reason is distinct from the rest because, unlike the sense and imagination,

⁴¹ *Consolation* IV.P6.134. Philosophy here uses the natural arrangement of the heavenly bodies revealed by astronomy to create an image of and prompt for the virtuous man whose mind is wholly focused on the Divine Mind. This is a step beyond the astronomical ethics of Timaeus, Ptolemy, and Boethius the character, who see in the ordered heavens themselves an exemplar of the order and harmony they seek to mirror in their own lives.

⁴² “*uti est ad intellectum ratiocinatio.*”

⁴³ *Consolation* IV.P6.134.

⁴⁴ See *Consolation* V.P4.160–62.

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it achieves a “universal outlook” (*universali consideratione*), but unlike understanding it can only attend to forms in sensible things. Understanding, on the other hand, gazes “with the pure vision of the mind upon the simple form itself.”

Philosophy’s description of reasoning fits well with the experience of geometry and astronomy. In these, the mind’s attention is fixed on a shape, drawn or imagined. Reason knows that what it sees to be true in the instance before it will apply equally to all others of the same kind. But do humans have experience of understanding as Philosophy describes it?

Ascending to Understanding

If we look back more carefully at the progression in Books II and III, we will see that Philosophy speaks as though she is leading Boethius along a path to gaze upon the form of true happiness. This path is best understood as following the stages laid out by Socrates for the ascension of one newly out of the cave.

Then I suppose he’d have to get accustomed, if he were going to see what’s up above. At first he’d most easily make out the shadows, and after that the phantoms of the human beings and the other things in water; and, later, the things themselves. And from there he could turn to beholding the things in heaven and heaven itself. . . Then finally, I suppose he would be able to make out the sun—not its appearances in water or some alien place, but the sun itself by itself in its own region—and see what it’s like.⁴⁵

When in Book II, Philosophy helped Boethius consider the goods of Fortune—wealth, offices, and fame—and renounce a desire for them, she had treated them as things in themselves. But in Book III she begins to reveal them to be only, as Socrates

⁴⁵ *Republic* VII, 515a.

had said of justice in the cave, shadows of images,⁴⁶ by promising to lead him to “true happiness, the happiness your soul dreams of, but which it can’t now see, since you are occupied with the mere shadows of things.”⁴⁷ She needs him now to look more carefully with his mind to realize that these are merely shadows,⁴⁸ and to look from them to the images casting the shadows, and finally, through them, to the true happiness of which they are images. She offers a complete list of the ordinary goods sought as constituting happiness—“wealth, honors, power, glory, pleasures”—but reveals that they in turn are sought even by ordinary men only as means to reaching corresponding goods as their ends—“sufficiency, respect, power, fame, and joy.”⁴⁹ In the desire for these ends, she detects that natural inclination toward the true Good that human beings divert into particular objects according to their “various opinions about how to achieve it.” She speaks of these as “faint images” and links their prominence in our lives to the short-sightedness of human thinking (*cogitatione*). Philosophy then addresses each of the shadows, showing that they act as “false images of true happiness” because they deceptively promise the goods really desired by men but they cannot deliver them.

She names this the “form of deceptive happiness,”⁵⁰ which leads not to blessedness but to misery. Because its adherents seek to acquire the goods of sufficiency, power, and so on, in isolation from one another, by pursuing wealth, offices, and the rest, it is doomed to fail them, for the ends can only be had together or not at all. From his mind’s gazing upon this “form,” Boethius can

46 Socrates says that the philosopher returning to the cave will be at a disadvantage when debating about “the shadows of the just or the representations of which they are the shadows.” *Republic* VII, 517d.

47 *Consolation* III.P1.63.

48 She also refers to them as “false images of blessedness.” *Consolation* III.P3.70.

49 *Consolation* III.P2.66–67.

50 *Consolation* III.P9.82.

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now turn his “mind’s gaze” (*mentis intuitum*) upon the “form” of true happiness: “the true and complete happiness is one that makes a man perfectly sufficient, powerful, revered, renowned, and joyful.” Sufficiency and power as found in mortal things, provide “images of the true Good” or perhaps things which could be called “imperfect goods”.⁵¹

Is this an act of reason or understanding? Philosophy speaks of it as the “mind’s gaze.” Rather than seeing the form in sensible things, the form itself becomes the focus, approached through uniting many images that seem separate into a single gaze. Boethius’s mind is now using the images as images to gaze toward the true good, and he is ready to consider where it can be found.

She proceeds in a similar way in Book V to elevate Boethius’s mind to gaze upon the divine understanding itself. Attending to the more manifest cognitive powers as though they are divided images allows for glimpses of the unified simplicity that is understanding. Boethius is now in a position to “contemplate—at least as far as we’re allowed to—the state of the Divine Being,” by peering through temporal things—and time itself—to eternity as through both shadows and images.

The infinite movement of temporal things imitates the present state of a life that does not move. . . . This presence [of the moment] bears a kind of image of that permanent presence, and it makes whatever things it contacts seem to have true being.⁵²

Thus in the last prose section, Philosophy has helped Boethius “climb up to the peak of that intelligence; from there reason

51 *Consolation* III.P9.84–85. By admitting that the “images” of the true good can be considered “imperfect goods,” Lady Philosophy prepares to use them as steps towards seeing the perfect good in III.P10.88ff.

52 *Consolation* V.P6.168.

will see what it cannot contemplate by itself,”⁵³ namely the simple form of Providence, through which his questioning soul is finally brought to rest.

Gazing on Man as Shadow and Image

Intelligence, as if looking down from above and grasping the form, distinguishes everything subject to the form, although it does so in the manner in which it comprehends the form itself, which cannot be known to anything else.⁵⁴

We can now see why Philosophy found in “rational animal and mortal” the most important cause of Boethius’s desperate state. It is the sort of definition that will content a young person nurtured on logic and the mathematical disciplines, especially as drawn from book learning. It allows him to look upon human beings with a universal grasp that is not confused by the many variations of character and situation. But this contentment in the face of the mystery of humanity is dangerous. It attempts to grasp man in a way comfortable to reason, but in considering man, who shares in the divine powers of understanding⁵⁵ and is meant for a happiness proper to the gods, reason needs to be pushed out of its comfort zone. Such contentment does not encourage him to use reason to develop the power of understanding in which he participates, nor does it help him to see that human happiness comes not so much from harmony with the natural order of the world as from participation in the

53 *Consolation* V.P5.165: “illic enim ratio videbit quod in se non potest intueri.”

54 *Consolation* V.P4.161.

55 St. Thomas presents an account of man as among the intelligences in *De ente et essentia*, 4: “Et hoc completur in anima humana quae tenet ultimum gradum in substantiis intellectualibus. . . . Unde efficitur in tantum propinqua rebus materialibus ut res materialis trahatur ad participandum esse suum, ita scilicet quod ex anima et corpore resultat unum esse in uno composito.”

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happiness that properly belongs to God. It also does not allow him to discern among human beings those whose lives embrace the shadow from those whose lives provide shining images of the Good to those around them.

Through Philosophy's gradual administrations, Boethius is led to experience the ascent to understanding and then gaze upon the power itself as it illumines the divine mode of knowing and governing and provides the possibility for man's achievement of happiness. This helps him to see beyond the legal forms of justice to the justice that flows from the divine governance working within man through love. Having elevated his mind to begin to gaze upon the divine simplicity of the Providential vision, he can gravitate toward the center and escape the domination of Fate. Perhaps his silence at the conclusion of the *Consolation* indicates that Boethius has achieved a state of fulfillment and rest.

Epilogue – A Model Teacher

The instrument with which each learns—just as an eye is not able to turn toward the light from the dark without the whole body—must be turned around from that which is coming into being together with the whole soul until it is able to endure looking at that which is and the brightest part of that which is.⁵⁶

A dialogue is a work of the imagination guided by reason, understanding, and experience. In the *Consolation*, Boethius presents his imagination of the ideal teacher, the semi-divine Lady Philosophy. In the story, she brings about Boethius's healing in a way that provides a model for the teacher of philosophy. She quickly sees that to teach Boethius in a way that will lead him toward wisdom demands much more than argument. She

⁵⁶ *Republic* VII, 518c.

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must re-turn his whole soul toward what truly is. She combines a physician's care for the concrete individual before her with a teacher's mastery of the many means of education. She begins by removing the outlets of self-indulgent pity and provokes him to express his philosophical crisis honestly from the bottom of his heart. She uses music, poetry, and rhetoric to wean him from attachment to ordinary human desires. She uses ethical analysis to help him distinguish the images from the shadows, then directs his mind through logical argument to conceive of their complete unity in God, which also gives him an experience of the way reason can help him to transcend its own limitations. This culminates in a new conception of God, not just as the Ruler of the heavenly bodies, but also as the presentially-seeing governor of all Who works through inspiring love for Himself as Good within the natures of everything. This also allows him to know himself truly and fulfill his natural love by forming himself into an image of the eternally prescient Good.

**PANIS ANGELICUS:
ON THE LITURGICAL HARMONY OF
THE METAPHYSICS OF PLATO AND ARISTOTLE
ACCORDING TO THE VIA THOMISTICA**

Hugh Barbour, O.Praem.

Furthermore, accidental form is below substance in order of dignity. Yet God makes some accidental form subsist without matter, as is clear in the sacrament of the altar. Thus all the more powerfully does he make some form subsist in the genus of substance without matter, and this is most clearly seen of spiritual substance.¹

In the *Seventh Letter*,² Plato describes the instantaneous arrival of true metaphysical insight that comes as a flash, filling the soul with light. This once-for-all insight, incapable of verbal expres-

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¹ St. Thomas Aquinas, *De Spiritualibus Creaturis*, a. 1, sc 13: "Praeterea, forma accidentalis est ordine dignitatis infra substantiam. Sed Deus facit aliquam formam accidentalem subsistere sine materia, ut patet in sacramento altaris. Ergo fortius facit aliquam formam in genere substantiae subsistere sine materia; et hoc maxime videtur substantiae spiritualis." All translations of St. Thomas are my own.

² Plato, *Letter VII*, 341 c-e.

sion, suddenly and forever fixes the soul in the contemplation of the Good and the Forms of the real, eternal world, which was but faintly remembered by the soul in the multiple sensible forms of the natural world and the doctrinal world of the forms considered in the propaedeutic *quadrivium*. Similar passages are to be found in the *Symposium*,³ the *Republic*,⁴ and, as we will see, in the *Phaedo*.

It seems that the contrast of this experience with the Aristotelian account, in which the intelligible forms of natural substances are in the things themselves, infinitely repeated and existing truly and not as mere occasions of a recollection, could not be greater. So it is that Aristotle ascends to the contemplation of the Good and the separated Forms by reason of the motion of sensible bodies with a method that makes no claim to instantaneous, mystical insight, but works by means of painstaking demonstration and conclusion. Is there a notion and an experience that could unite and reconcile these accounts? It would appear not, at least if we take Plato's teaching only *verbis tenuis*, as Aristotle seems to do, or if we insist that Aristotle's *via* is the only properly philosophical one. Saint Thomas Aquinas does neither, and neither ought his disciples. In particular, the Angelology and Eucharistic doctrine of St. Thomas point the way to such a reconciliation.

Years ago, in the late 1970s, when I was an undergraduate in Classics at Chapel Hill, I followed a course in the Department of Philosophy on Aristotle given by Dr. Edward Galligan. He was a cheerful, big man, who still smoked while lecturing, and was the lone practitioner of traditional metaphysics in a department rather more given to logical positivism than to the nature of things, whether moved or unmoved. One day, much to my delight, he gave us copies of some articles from the *Summa*

³ Plato, *The Symposium*, 210c.

⁴ Plato, *The Republic* VI, 494a.

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Theologiae of St. Thomas on the manner in which Christ's dimensive quantity can be said to be present in the Eucharist. This he did in order to illustrate how genuine philosophical insight could be occasioned by theological discussions that of themselves are not within the scope of natural reason. Esoteric mysteries, he said, have provided matter for progress in philosophy, even in the philosophy of nature and in metaphysics. The particular insights, he insisted, have a rational value taken independently of their original mystagogic context. This one lecture made a profound impression on me, and now provides an anecdotal introduction to the present paper and especially to its concluding suggestions. So, to the Eucharist and quantity we will return, after an array of considerations about the angels that may seem to be far removed from them.

*Governing Principles According to St. Thomas
for Understanding Aristotle's Treatment
of the Platonic Doctrine of Separated Substances*

In this *Commentary on the Metaphysics of Aristotle*, St. Thomas makes some observations about the manner of expression that characterizes the philosophers who preceded Aristotle. He points out that the symbolic or metaphorical language of the *poetae theologizantes*, like Hesiod, or the physicists, or even Plato cannot be answered or examined in their own terms, since they intended to convey their teaching in a manner which superficially conceals their meaning. St. Thomas asserts in his commentary on Book III of the *Metaphysics*:

It should be taken into consideration that among the Greeks or the natural philosophers there were certain pursuers of wisdom who took on the perspective of the gods, hiding the truth under a certain covering of fables, as Orpheus, Hesiod, and certain others; even Plato hid

the truth of philosophy under mathematics, as Simplicius tells us in his commentary on the *Predicaments*. . . . Then . . . he [i.e., Aristotle] excuses himself from a more attentive investigation of this opinion; and he says that it is not fitting to attend with much care to those who chose to philosophize with fables, namely, hiding the truth of wisdom under fables. This is because if one were to dispute against their sayings according to how they sound exteriorly, they are ridiculous. But if someone wishes to inquire according to the truth which is hidden under the fables, this truth is not able to be demonstrated manifestly. *From which we gather that Aristotle, when disputing against Plato and others of this sort who handed on their teaching hiding it under certain other things, does not dispute according to the hidden truth, but according to those things as they are proposed exteriorly.*⁵

In the case of Plato and the *Platonici*, this text is very important, since it provides a key for understanding St. Thomas's evaluation of Aristotle's refutation of their apparent teaching about sensible things. Aristotle does not dispute with the truth hidden in their expressions, but with what they express outwardly. Thus, St. Thomas more than implies that their expressions do not

5 *In libros Aristotelis Metaphysicorum*, Book 3, lec. 11, ns. 3–6: “Considerandum est, quod apud Graecos, aut naturales philosophos, fuerunt quidam sapientiae studentes, qui deis se intromiserunt occultantes veritatem divinorum sub quodam tegmine fabularum, sicut Orpheus, Hesiodus et quidam alii: sicut etiam Plato occultavit veritatem philosophiae sub mathematicis, ut dicit Simplicius in commento praedicamentorum. . . . Deinde . . . excusat se a diligentiori huius opinionis investigatione: et dicit quod de illis, qui philosophari voluerunt fabulose, veritatem scilicet sapientiae sub fabulis occultantes non est dignum cum studio intendere. Quia si quis contra dicta eorum disputaret secundum quod exterius sonant, ridiculosa sunt. Si vero aliquis velit de his inquirere secundum veritatem fabulis occultatam, immanifesta est. *Ex quo accipitur quod Aristoteles disputans contra Platonem et alios huiusmodi, qui tradiderunt suam doctrinam occultantes sub quibusdam aliis rebus, non disputat secundum veritatem occultam, sed secundum ea quae exterius proponuntur.*”

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reflect their actual convictions about the truth of things and that the Aristotelian disputation regarding their exteriorly expressed opinions is based only on their teaching, as it were, *secundum quod (verba) exterius sonant*. This exercise of providing a critique of an exterior sense not intended by the author is only reasonable, since many of those who follow and interpret the teachings of Plato take him at his word, as expressed in his exoteric dialogues, and not according to some esoteric truth intended but not outwardly expressed. The key point where this methodology must be taken into account is the Platonic expression of the specific nature of the separated substances that contain and cause the natures of sensible things. St. Thomas teaches that Plato's assertion that the separated substances are of the same nature as the sensible realities is a didactic instrument for conveying the doctrine of separated substances rather than a simple assertion of their nature. The root of this insight is the fact that the *ratio* of substance as such is not bound to corporeal dimensions, even though it may be that the substance of corporeal things is in fact naturally bound to these dimensions. St. Thomas tell us in his commentary on Book VII of the *Metaphysics*:

In this, however, they did not speak correctly, because they say that one species is in many. For these two seem to be opposed: that something should be separated existing in itself, and even so have being in many. However, the reason on account of which the Platonists were induced to posit separated substances of this sort, which nevertheless have being in many, is this: since they discovered by reason that there ought to be some incorruptible and incorporeal substances *since the nature of substance is not bound to corporeal dimensions*. But as to what substances of this sort are, which indeed are incorruptible and exist beyond these singular and sensible substances, they do not have wherewith to give an account, that is,

they cannot signify or demonstrate manifestly, since our knowledge begins from sense, and *so we cannot ascend to incorporeal things which transcend the sense, unless to some extent we are led by the hand through sensible things. And thus, so that they might be able to hand on some knowledge of incorruptible incorporeal substances, they “make” them, that is, they pretend that they are the same in species as corruptible substances*, just as in these corruptible substances is found a singular corruptible man, and similarly a horse. They posited, therefore, that among those separated substances there would be some substance that would be a man, and another that would be a horse, and so with the others as well. But they did so with this difference: that we know these separated substances, from the teaching of the Platonists, through the fact that we say “autanthropos,” that is, “man per se,” and “authippos,” that is, “horse per se.” And thus among singular sensible substances we add this word, that is this expression “auto,” that is, “per se.”⁶

6 Ibid., Bk. 7, lec. 16, ns. 13–14: “In hoc autem non dixerunt recte, quia dicunt unam speciem esse in multis. Haec enim duo videntur esse opposita: quod aliquid sit separatum per se existens, et tamen habeat esse in multis. Causa autem propter quam inducti sunt Platonici ad ponendum huiusmodi substantias separatas, et tamen esse in multis, haec est: quia per rationem inveniunt quod oportet esse aliquas substantias incorruptibiles et incorporeas, *cum ratio substantiae corporalibus dimensionibus non sit obligata*. Sed quae sunt huiusmodi substantiae, quae quidem sunt incorruptibiles, et sunt praeter has substantias singulares et sensibiles, non habent reddere, idest non possunt assignare et manifestare, eo quod nostra cognitio a sensu incipit, *et ideo ad incorporea quae sensum transcendunt, non possumus ascendere, nisi quatenus per sensibilia manuducimur. Et ideo, ut aliquam notitiam traderent de substantiis incorporeis incorruptibilibus, faciunt, idest fingunt eas, easdem esse specie substantiis corruptibilibus*, sicut in istis substantiis corruptibilibus invenitur homo singularis corruptibilis, et similiter equus. Posuerunt igitur quod etiam in illis substantiis separatis esset aliqua substantia quae esset homo, et aliqua quae esset equus, et sic de aliis: sed differenter: quia has substantias separatas scimus, ex doctrina Platoniorum, per hoc quod dicimus autanthropon, idest

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It is clear that the assertion that the separated substances are the very self-same species of sensible things is a fiction—*figunt eas*—adopted in order to lead the imaginative minds of students to the doctrine of the *ratio substantiae*, which of itself is not bound to corporeal dimensions accessible to the senses. Thus for the Platonists the use of sensible things is a *manuductio*, that is, an instrument of teaching, rather than their actual method, or *via*, for arriving at their conclusions. More will be said later about the relation of this insight to the understanding of Plato's use of mathematical forms in his doctrine, referred to in the previous quotation from the commentary on Book III, relying on the testimony of Simplicius.⁷

*St. Thomas's Own Understanding of the Via Platonica
as Exemplified in De Substantiis Separatis*

per se hominem, et authippon, idest per se equum. Et ita in singulis substantiis sensibilibus ad designandas substantias separatas addimus hoc verbum, idest hanc dictionem auto, idest per se.”

⁷ Such a testimony is one of the many irrefutable pieces of evidence for the oral tradition of Platonic teaching, which can be regarded, on the authority of Plato's *Seventh Letter*, as having a higher authority than his written corpus, and as being practically the source of the medieval Latin world's knowledge of Platonic metaphysics, weak as it was in the knowledge of the whole body of the dialogues. The thesis of the Tübingen school regarding this tradition can be regarded broadly as a reliable guide in the study of Plato. See Marie-Dominique Richard, *L'enseignement oral de Platon* (Paris, Editions du Cerf, 2005). Even so, the mathematical-geometric content of this oral tradition is, for St. Thomas, simply a didactic method, another *manuductio*. As quoted previously, he states “Plato occultavit veritatem philosophiae sub mathematicis.” This appears to be consonant with what Plato says about the “quintessential” moment of properly metaphysical insight in the same *Letter*. St. Thomas seems to interpret keenly, using exclusively the sources of the oral tradition. This is an a posteriori confirmation, at least for Thomists, of the authenticity of the conclusions of the Tübingen school, since it would seem that the Platonic doctrine was adequately conveyed to him from these sources. Otherwise we might conclude that he was incapable of a true exegesis of Plato, lacking the latter's whole exoteric corpus, save perhaps the *Timaeus*, which he may not even have examined directly.

In chapter four of *On Separated Substances*, St. Thomas contrasts Plato's and Aristotle's manner of arriving at the positing of separated substances. The contrast is not simply what might be expected, namely, that Plato arrives at his conclusion because he does not proceed from that which is *secundum sensum*, and that Aristotle arrives at his because he does proceed *a sensibilibus*. Now, in the case of Aristotle the approach is as expected, whereas for Plato, St. Thomas points out that the latter's position is not so much the result of his having eschewed sensible observation, but rather because he examines the nature of things in themselves:

Just because Plato did not restrict the number of separated intellects to the number of heavenly movements, he was not on this account moved to posit separated intellects, *but rather as he considered the nature of things in themselves*. But Aristotle, not being willing to move away from sensible things, arrived at positing intellectual separated substances by the consideration of movements alone, as has been said above, and thus he restricted their number to the heavenly motions.⁸

What does this mean, to consider the very nature of things in themselves? How is this contrasted with a method which proceeds by hewing closely to sensible things? St. Thomas explains this contrast by introducing a distinction between the *via sufficientior* of Plato, and the *via manifestior sed minus sufficientior* of Aristotle.

In the first chapter of the treatise St. Thomas contrasts

⁸ St. Thomas, *De substantiis separatis*, ch. 4: "Quia Plato non coarctavit numerum intellectuum separatorum numero caelestium motuum: non enim ex hac causa movebatur ad ponendum intellectus separatos, *sed ipsam naturam rerum secundum se considerans*. Aristoteles vero a sensibilibus recedere nolens ex sola consideratione motuum, ut supra dictum est, pervenit ad ponendum intellectuales substantias separatas: et ideo earum numerum coarctavit caelestibus motibus."

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Plato's method of arriving at separated substances with the doctrine of Anaxagoras, who posited only one such substance, whose role he did not adequately expound. This method depends on rising from sense knowledge to the fixed nature of things found in beings separated from the changing realm of the senses. The intellect then intuits some natures apart from the matter of sensible things:

By a more sufficient method Plato proceeded to set aside the opinion of the first physicists. Since with the ancient physicists it was posited that the certain truth about things could not be known, both on account of the continuous flux of bodily things, and because of the deception of the senses whereby bodies are known, he posited that there were some natures separated from the matter of changeable things, in which there would be a fixed truth, and so by adhering to these our soul might know the truth. Whence it would follow that the intellect knowing the truth apprehends some things apart, beyond the matter of sensible things, and so he reckoned that there exist some things separated from sensible things.⁹

Even so, this *via sufficientior* lacks a key quality found in Aristotle's method of coming to posit by way of motion the existence of substances that are separated from matter. This way is more manifest and more certain, as St. Thomas everywhere asserts, but even so, this method does not have the comprehensive

⁹ *De substantiis separatis*, ch. 1: "Plato sufficientiori via processit ad opinionem primorum naturalium evacuandam. Cum enim apud antiquos naturales poneretur ab hominibus certam rerum veritatem sciri non posse, tum propter rerum corporalium continuum fluxum, tum propter deceptionem sensuum, quibus corpora cognoscuntur; posuit naturas quasdam a materia fluxibilium rerum separatas, in quibus esset veritas fixa; et sic eis inhaerendo anima nostra veritatem cognosceret. Unde secundum hoc quod intellectus veritatem cognoscens aliqua seorsum apprehendit praeter materiam sensibilibus rerum, sic existimavit esse aliqua a sensibilibus separata."

breadth of higher metaphysical speculation.

Yet Aristotle's more manifest way still falls short of the depth and comprehension of Plato's doctrine, since, in the first place, it cannot account for a number of occurrences in the realm of the senses that cannot be reduced to the movement of bodies but require the intervention of an intellectual substance. Later in the chapter we read:

This position of Aristotle seems more certain, since it does not veer much from the things which are manifest according to sense; nevertheless, it seems less sufficient than the position of Plato. First of all, indeed, since many things appear on the level of sense for which a reason cannot be given according to those things handed on by Aristotle. For there appear, among men who are oppressed by demons or in the works of magi, certain things that do not seem to be possible except through the agency of some intellectual substance.¹⁰

10 Ibid: "Haec autem Aristotelis positio certior quidem videtur, eo quod non multum recedit ab his quae sunt manifesta secundum sensum; tamen minus sufficiens videtur quam Platonis positio. Primo quidem, quia multa secundum sensum apparent quorum ratio reddi non potest secundum ea quae ab Aristotele traduntur. Apparent enim in hominibus qui a Daemonibus opprimuntur, et in magorum operibus, aliqua quae fieri non posse videntur nisi per aliquam intellectualem substantiam." In dealing with the Platonic *via* here, St. Thomas limits himself to referring to demonic intervention in possession and in the magic arts as an example since he would not formally attribute to Plato any sure knowledge of the operation of good separated substances, since this would be a matter of revelation. This revealed knowledge, with its theological development in the tradition, combined with the insights of Plato and Aristotle, constitutes the source of his own teaching on the angels and their manifestations and operations in the sensible world. Clearly, though, in another context the work of the good spirits would serve well as an example for this point of metaphysical discovery in contrast to Aristotle's *via* which requires no revealed or preternatural examples. Aristotle does not deal with *daimones* or with human souls as part of the order of intellectual substances. St. Thomas's insistence on this is a Platonic acquisition, fortified by revelation.

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In the second place, Aristotle's *via manifestior* cannot account for the extreme inconvenience of positing so few separated substances based solely on the number of immutable motions of the heavenly bodies:

it appears inconvenient for immaterial substances to be confined to the number of bodily substances. For those which are higher among beings do not exist on account of those who are lower, but rather conversely; for that on account of which something is, is the more noble thing. The nature of an end cannot be understood sufficiently from the things which are dependent on the end, but rather conversely. Whence it is that the greatness and power of higher things cannot be sufficiently understood from the consideration of lower things. This is manifestly apparent in the order of bodily things. For the greatness and number of the heavenly bodies cannot be understood from the disposition of elemental bodies, which are as nothing in comparison to them. However, the immaterial substances exceed bodily substances more than the heavenly bodies exceed the elemental bodies. Whence the number and power and disposition of immaterial substances cannot be sufficiently understood from the number of heavenly movements.¹¹

¹¹ Ibid.: "Secundo, quia inconueniens videtur immateriales substantias ad numerum corporalium substantiarum coarctari. Non enim ea quae sunt superiora in entibus, sunt propter ea quae in eis sunt inferiora, sed potius e converso: id enim propter quod aliquid est, nobilius est. Rationem autem finis non sufficienter aliquis accipere potest ex his quae sunt ad finem, sed potius e converso. Unde magnitudinem et virtutem superiorum rerum non sufficienter aliquis accipere potest ex inferiorum rerum consideratione: quod manifeste apparet in corporalium ordine. Non enim posset caelestium corporum magnitudo et numerus accipi ex elementarium corporum dispositione, quae quasi nihil sunt in comparatione ad illa. Plus autem excedunt immateriales substantiae substantias corporales, quam corpora caelestia excedant elementaria corpora. Unde numerus et virtus et dispositio immaterialium substantiarum ex numero caelestium motuum sufficienter apprehendi non potest."

This line of reasoning is precisely that of considering the very nature of things in themselves, *ipsa natura rerum secundum se*, as a universal order of beings and causes in being, which the argument from motion cannot comprehensively include, since it is limited to the sensible order for its illations. This is the expression (presented at the beginning of this section) of St. Thomas's most general characterization of the difference between the *via Platonica* and the *via Aristotelica*, and its meaning might be obscure to Thomists who have not considered carefully the former. Here St. Thomas is not using *natura* according to its meaning in the *Physics*, but rather comprehensively according to its meaning as the whole of ordered reality, taken formally and hierarchically, including the interior experience of humanity, thus not only *natura*, but *natura rerum*, and then not only *secundum sensum*, but *secundum se*. Plato concludes to the existence of a great number of separated intelligences because his way is not limited to the analysis of motion, but rather examines those aspects of things that cannot be accounted for by a method strictly linked to the sensible order. While Plato does consider sensible phenomena, they are not the principles of his argument. While they can form an argument by a kind of *manuductio*, as the previous texts from Book VII of the *Commentary on the Metaphysics* point out, the determining element is an intellectual intuition of the very order of the universe implied by the experience of the intelligibility of natures, even those of material things, considered in their substantial nature, and not limited to their motion, which is solely on an accidental property of bodies. Here is the meaning of the distinction between the consideration of *ipsa natura rerum secundum se* and the consideration of things *secundum sensum*.

Later in the second chapter of the treatise, St. Thomas points out that Aristotle himself admits that his conclusions about the number of separated substances are not necessary, but

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simply those that can be drawn from his method. To make a greater claim he says he leaves to stronger minds than his, since his method is not sufficient to conclude more than it does. Thus in asserting the greater sufficiency of Plato's method in these matters, St. Thomas grants to Aristotle an awareness of the comparative modesty of his more manifest and rationally certain determinations, quoting his admission from the eighth chapter of Book XII of the *Metaphysics*:

Thus it is not necessary that there not be more immaterial substances than the number of heavenly movements. Aristotle, thus intuiting, did not conclude this as though it were necessary, but only as if it were probable. So he said before he assigned the aforesaid rationale, having enumerated the heavenly movements, why it would be reasonable to accept just such a number of substances, both immobile and sensible principles: It should be left to greater minds to say what is necessarily the case. He did not reckon himself competent to conclude with certainty in these matters.¹²

The *via* of Aristotle is thus more manifest as regards method and more efficacious in its demonstration, but it falls far short of being a sufficient reflection of the actual nature of things. For this the *via* of Plato is needed.

Excursus on the Meaning of a Method

¹² *De substantiis separatis*, ch. 2: "Ideo non est necessarium quod non sint plures immateriales substantiae quam sit numerus caelestium motuum. Et hoc praesentiens Aristoteles non induxit hoc quasi necessarium, sed quasi probabiliter dictum. Sic enim dixit antequam praedictam rationem assignet, enumeratis caelestibus motibus, quare substantias et principia immobilia et sensibilia tot rationabile est suscipere: necessarium enim dimittatur fortioribus dicere: non enim reputabat se sufficientem ad hoc quod in talibus aliquid ex necessitate concluderet."

*Based upon the Ipsa Natura Rerum Secundum Se
as Found in the Writings of Plato*

St. Thomas's expressions are very formal, but they cannot be based on direct textual contact with any of Plato's presentations of his method.¹³ Even so, St. Thomas acutely describes the nature of the Platonic way, which Plato calls "the second voyage" in philosophy since it departs from the original speculations of the physicists.¹⁴

Perhaps the most succinct rationale for this Platonic way described in the opusculum is given in the statement quoted previously from Book VII of the *Commentary on the Metaphysics*: "The nature of substance is not bound to bodily dimensions."¹⁵ It is in any case most helpful to consider what Plato presents as the order of arriving at truly metaphysical insight in Books VI and VII of the *Republic*.

Implicitly in the analogy of the divided line in Book VI and explicitly in the explanation of the analogy of the cave in Book VII, Plato introduces the study of intelligible, supra-sensible nature by a training in arithmetic, geometry, and astronomy. This is undertaken, not so much to explain the natures of sensible things, but to train the soul to think of separated, immaterial forms by means of the study of proportions. It provides a symbolic propaedeutic to the final experience of metaphysical contemplation. In the realm of these sciences, which are also arts

¹³ See footnote .

¹⁴ *Phaedo* 99b6–d3. Here we see a key stage in what has been called Socrates's "intellectual biography" in this dialogue. This involves his transition from that wisdom which is the "study of nature" (96a8) to the study of the "truth of things" (99e6). This original Greek metaphysical insight is, as will be shown later in this paper, practically the same as St. Thomas's *ipsa natura rerum secundum se considerata*, as opposed to its restriction to mobile being, combined with the non-dimensive *ratio substantiae*. These marks, as will be seen shortly, are together constitutive of the *via platonica*.

¹⁵ See footnote 6: "Ratio substantiae corporalibus dimensionibus non sit obligata."

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for disposing the soul for metaphysics, the soul reasons from undemonstrated axioms to certain conclusions. In metaphysical contemplation, or true dialectic, the soul moves by intuition among the forms, not taking them from given principles, but considering them in themselves. This is the *iter*, described in *Seventh Letter*, which precedes the sudden moment of insight into true being.

The Liturgical Harmony

The present paper intends to present St. Thomas's exposition of the mystery of the Holy Eucharist as an example of his use of the *via platonica*, that is, *ipsam naturam rerum secundum se considerans*, along with the principle that *ratio substantiae corporalibus dimensionibus non est obligata*. At first, this may seem counter-intuitive, as St. Thomas's consideration of the nature of the Eucharistic presence of the Body and Blood of the Lord is far from the Platonic account of natural realities in that St. Thomas's understanding of natural substance is based on hylomorphism and individuation through quantity. There is far too much, it would seem, of Aristotelian natural philosophy in his treatment to discern in it an outline of the *via platonica*. For the consideration of separated substances this *via* has its place, as has been shown, but for natural substances existing on the Aristotelian paradigm, there would seem to be no place for it. In the prooemium to his commentary on the *De Divinis Nominibus* of the Areopagite, St. Thomas himself states:

Therefore, in this account of the Platonists they do not conform to faith or natural truth in what they hold about the separated natural species, but as far as they spoke of the first principle of things their opinion is most true and consonant with the faith.¹⁶

¹⁶ St. Thomas, *In librum B. Dionysii De divinis nominibus expositio*, prooem.:

However, it will be shown directly that even if the notion of separated forms of natural things is neither consonant with philosophy or faith as an account of created nature, St. Thomas clearly makes use of the absolute possibility of such a mode of existence for a natural thing in his exposition of the supremely supra-rational mystery of the Blessed Sacrament. And in any case, we have seen already that St. Thomas holds that this doctrine of separated forms of sensible things was simply a symbolic way of conveying the notion of separated substances, not an assertion about the actual nature of corporeal being.

Was St. Thomas explicitly aware of this Platonic model in his exposition of the Eucharistic mystery? Most definitely: He

“Haec igitur Platoniorum ratio fidei non consonant nec veritati, quantum ad hoc quod continent de speciebus naturalibus separatis, sed quantum ad id quod dicebant de primo rerum principio verissima est eorum opinio et fidei Christianae consona.” *Verissima est eorum opinio* is a striking expression. St. Thomas uses the superlative of *verum* only in one other context, and that is to describe the truth of the first principles of reason. And in this context it refers to the absolute transcendence of the Divine Nature to any kind of being contained under the notion of *ens* or *esse commune*. This is a topic much discussed, of course, and not immediately applicable to our discussion, except at the very end. Suffice it to say that in this commentary St. Thomas is most explicit in his removal of the revealed Divine Nature from the realm of philosophical metaphysics: “All existing things are contained under the common ‘to be’ itself, but not God. Rather, the common ‘to be’ of things is contained under his power, since the divine power extends to more than the created ‘to be.’” *Ibid*, ch. 5, lec. 2, n. 660. (“Omnia existentia continentur sub ipso esse communi, non autem Deus, sed magis esse commune continetur sub eius virtute, quia virtus divina plus extenditur quam ipsum esse creatum.”) This all indicates the particular theological convenience of the *via platonica*, as it is simply a human inquiry in search of a revelation, rather than a demonstrative, manifest account of natural realities. One might assert that the *via aristotelica* is reducible to the *verissimum* of the first principles of natural reason, affirmative in tendency, and that the *via platonica* is a reduction by sublimation to the *verissimum* of the ineffable Divine Nature, negative in tendency. St. Thomas would be the master of both ways in a methodical synthesis of the two, a kind of symphony. He says in the *Summa contra Gentiles* IV, ch. 1: “Est autem eadem via ascensus et descensus.” But this would be another paper.

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introduces the Platonic doctrine precisely at the point where the Eucharist most clearly fits the Platonic movement of the mathematical propaedeutic of the contemplation of intelligible quantities toward the contemplation of the Forms themselves—namely, in the separated, because not subjected, but individualized existence of the dimensive quantity of the sacramental accidents, which mirror the Platonic doctrine of separated mathematical Forms:

In this sacrament, God in this way conserves the accident in being, with the substance which was conserving it removed. This can indeed especially be said of the dimensive quantities which the Platonists also posited as subsisting of themselves, on account of their being separated according to the intellect. For it is evident that God can do more in his operation than the intellect in its apprehension.¹⁷

Thus, what the natural intellect can do using the second degree of abstraction in the consideration of mathematical and geometric quantities as though they subsist in themselves, God can realize in fact—beyond the limitations of human agency and understanding, and not by intellectual abstraction, but by an actual separation. Thus the stereotypical and often refuted error of the Platonists, but arguably not of Plato, regarding the separated intelligible forms being of the same species as the sensible ones is both obviated and corrected by being sublimated into the mystery. This mystery knows no more formal principle than the nature of being itself and infinite divine power.¹⁸

¹⁷ ScG IV, ch. 65: “Et hoc modo, in hoc sacramento, accidens conservat in esse, sublata substantia quae ipsum conservabat; quod quidem praecipue dici potest de quantitibus dimensivis, quas etiam Platonici posuerunt per se subsistere, propter hoc quod secundum intellectum separantur. Manifestum est autem quod plus potest Deus in operando quam intellectus in apprehendendo.”

¹⁸ *STh* III, q. 75, a. 4, ad 3: “Ad tertium dicendum quod virtute agentis infiniti,

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It is by virtue of an infinite agent which has action over all being that such a change can take place, since to both form and matter the nature of being is common.

This clarification is accomplished by the acknowledgment of the reality of the continued, individuated, but separated existence of the quantity and the other accidents which sensibly inhere in it, and the status of the existence of the Eucharistic accidents as the object of a judgment of separation, not a second degree abstraction or a concept abstracted from individual matter. The sacramental signs, that is, the accidents of bread and wine, existing in a dimensive quantity without a subject in which they inhere, that is, *per se subsistentes*, albeit by divine power, prepare the believing mind *per modum signi* to perceive beyond them the presence of the Body and Blood of the Lord.

The mind perceives the subsisting existence of the dimensive quantity of the bread in a manner quite analogous to concrete angelic intuition. That is, in the case of sacramental accidents, the believing mind knows them precisely as they exist, not by way of abstraction from their material subject, which no longer exists, but by the intervention of faith, which is an intellectual intuition. This is a clear analogy with the concrete, but utterly non-abstractive knowledge of an angel. One who would know and judge the Eucharistic quantity rationally according to the usual abstraction—as separated by the mind from a subject which remains—would be in error. The only way to know them as they are is in a manner which mirrors the Platonist claim to contemplate subsisting quantitative dimensions in mathematico-geometric contemplation.¹⁹ Thus the Eucharistic sign is

quod habet actionem in totum ens, potest talis conversio fieri, quia utrique formae et utrique materiae est communis natura entis; et id quod entitatis est in una, potest auctor entis convertere ad id quod est entitatis in altera, sublato eo per quod ab illa distingebatur.”

¹⁹ Of course the analogy is only that, since, unlike Platonic mathematical

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truly and in a formal way a *Panis Angelicus* both *in essendo et in cognoscendo*.

It is equally true that St. Thomas unites the two ways of Plato and Aristotle in his theology of the Eucharistic body of Christ, the thing signified by the angelic bread. According to St. Thomas, in this sacrament we find a body that is present along with its bodily accidents, including dimensive quantity. Yet these accidents are present through the quantity, as is the quantity itself, solely *per modum substantiae*, and not in their *sensible* nature. Thus, the body's manner of existence is invisible and otherwise inaccessible to the senses, even to the bodily eye of Christ himself. The body is only perceived by the intellect, whether by faith or angelic or beatific knowledge. The body is not present locally, but again only and precisely in the mode of a substance, and is in a place after the manner of a separated substance acting in a place, insofar as any agent is present exactly where it acts. It is thus not moved about in the sacrament, etc. The rationale for this is precisely what Thomas refers to previously, when he tells us that Plato reasoned as he did regarding separated substances because *ratio substantiae corporalibus dimensionibus non sit obligata*. This same *via* is used by Thomas for the exposition of the nature of the Lord's corporeal presence in the Sacrament.

The dimensive quantity of the body of Christ is in this sacrament not according to its proper mode, namely, that it be whole in the whole and single parts in single parts, but through the mode of a substance whose nature is

forms, the Eucharistic dimensions are indefinitely multiplied, but without multiplying the "form" of the Body and Blood which they signify. Even so, the manner of existence and the manner of knowing these dimensions closely parallel the manner of existence and the manner of knowing the Platonic mathematical entities.

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whole in the whole and whole in each part.²⁰

Just as the substance of the bread was not under its own dimensions locally, but through the mode of a substance, thus neither was the substance of the body of Christ. Nevertheless, the substance of the body of Christ is not the subject of those dimensions, as was the substance of the bread. Thus the substance of bread by reason of its dimensions was locally there, since it was compared to the place by means of its own proper dimensions. The substance of the body of Christ is compared to that place by means of the dimensions of another. Thus it is conversely that the proper dimensions of the body of Christ are compared to that place by means of the substance, which is contrary to the nature of a body found in a place. Thus in no way is the body of Christ in this sacrament locally.²¹

It is this way, however, with those things which in themselves can be in a place, as in the case of bodies, and it is another way with those things which in themselves cannot be in a place, as in the case of forms and spiritual substances. It is this mode by which we say that Christ is moved accidentally according to the being which he has

20 *STh* III, q. 76, a. 4, ad 1: “Quantitas dimensiva corporis Christi est in hoc sacramento non secundum proprium modum, ut scilicet sit totum in toto et singulae partes in singulis partibus; sed per modum substantiae, cuius natura est tota in toto et tota in qualibet parte.”

21 *Ibid.*, a. 5, c.: “Sicut substantia panis non erat sub suis dimensionibus localiter, sed per modum substantiae, ita nec substantia corporis Christi. Non tamen substantia corporis Christi est subiectum illarum dimensionum, sicut erat substantia panis. Et ideo substantia panis ratione suarum dimensionum localiter erat ibi: quia comparabatur ad locum mediantibus propriis dimensionibus. Substantia corporis Christi comparatur ad locum illud mediantibus dimensionibus alienis: ita quod e converso dimensiones propriae corporis Christi comparantur ad locum illum mediante substantia, quod est contra naturam corporis locati. Unde nullo modo corpus Christi est in hoc sacramento localiter.”

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in this sacrament, in which he is not as in a place.²²

The body of Christ is in this sacrament in the mode of substance. A substance, however, as such is not visible to the bodily eye, nor does it lie under the power of any sense or imagination, but only under the intellect, the object of which is essence, as it is said in the third book of the *De Anima*.²³

The bodily eye of Christ sees himself existing in this sacrament, nevertheless it is not able to see the mode of existing itself whereby it is under the sacrament, the perception of which pertains to the intellect.²⁴

In addition to characterizing the mode of the presence by concomitance of the dimensive quantity and other naturally sensible accidents of the Body of the Lord in the Eucharist, St. Thomas uses the expression *per modum substantiae* in three other contexts: (1) in clarifying substantial predication from accidental,²⁵ (2) in characterizing the subsistent relations in the Blessed Trinity,²⁶ which use is combined of course with the question of predication, and (3) in distinguishing the manner in which

22 Ibid., a. 6, ad 1: "Aliter tamen ea quae per se possunt esse in loco, sicut corpora, et aliter ea quae per se non possunt esse in loco, sicut formae et spirituales substantiae. Ad quem modum quod dicimus Christum moveri per accidens secundum esse quod habet in hoc sacramento, in quo non est sicut in loco."

23 Ibid., a. 7, c.: "Corpus Christi est in hoc sacramento per modum substantiae. Substantia autem, in quantum huiusmodi, non est visibilis oculo corporali, necque subiacet alicui sensui, necque imaginationi, sed solo intellectui, cuius obiectum est quod quid est ut dicitur in III *De Anima*."

24 Ibid., ad 2: "Oculus corporalis Christi videt seipsum in hoc sacramento existentem, non tamen potest videre ipsum modum existendi quo est sub sacramento, quod pertinent ad intellectum."

25 Among the numerous possible references: *De Potentia*, q. 9, a. 6, c.; *De Virtutibus*, q. 11, a. 1, c.

26 Among the numerous possible references: *De Potentia*, q. 9, a. 4, c.

angels know from the manner in which human beings know.²⁷ All of these uses have in common with the characterization of the *via platonica* the analysis of the revealed data *secundum ipsam natura rerum* and not according to the mere senses, insofar as the type of relation, the manner of presence, and the mode of knowledge are not those accessible to sense knowledge. Yet the Trinitarian relations are preeminently real; the concomitant Eucharistic dimensive quantity really present and perceptible to an intellect, although incapable of being sensed; and the angelic knowledge and the knowledge of human supernatural faith are concrete, yet solely intellectual. Thus, subjective existence and objective knowledge are joined *per modum substantiae*, transcending the order of sensible, accidental being. Now, this manner of existence and of knowing would correspond exactly to the manner of existence of a Platonic form that governs a sensible participation in that form, and the manner of knowing such a form.

However, for St. Thomas, the instances of a relation that is subsistent, or of a body that is present with its quantity and accidents while these latter are not present according to their own accidental mode, but rather according to the mode of a substance (*cuius natura est tota in toto et tota in qualibet parte*) and under sensible signs of a dimensive quantity existing *per se* and not in a subject, are both examples of strictly revealed mysteries—that is, things whose intrinsic rationale is unknowable to natural reason. In fact, these instances of existence *per modum substantiae* of accidents and naturally sensible things sublimated to the mode of substantial existence are only sapiential expositions of mysteries that are in fact not fully explained by this mode; rather, they are only rendered more compatible with the order of things perceived by the natural, abstracting intellect. Their intrinsic evidence is completely hidden from the intellect,

27 Among the numerous possible references: *STh* I, q. 89, a. 2, c.

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apart from the super-mystical experience of the beatific vision.

This theological construction largely corresponds to the Platonic understanding of the contemplation of intelligible mathematical forms as propaedeutic to the super-intelligible experience of sudden enlightenment in the contemplation of the Good.²⁸ Of this latter, of course, according to Plato, nothing can be said or written. Rightly, then, did *our* Plato, St. Thomas, say that, in comparison to what he had seen in mystical revelation, all he had written seemed to be so much straw. Even so, it is the *via platonica* which is the more adequate way to articulate these revealed mysteries, while taking into the account the natural structure of things according to the categories and physical doctrine of the more manifest *via aristotelica*. After all, as we have seen, *ipse dixit*—of whom it is said that he always spoke *formalissime*. It was, of course, at Holy Mass that Thomas had this mystical experience, and thus the liturgical harmony of Plato and Aristotle is one that ends in a most eloquent silence.²⁹ This is the *via thomistica* in its consummation.

28 See here the very important observations made in footnote 16 above. The perhaps mildly scandalized Aristotelian Thomist should read it closely.

29 Thus the model of the existence and knowability of a Platonic form is given as a minimum or limit of this manner of explaining reality solely in the case of the Blessed Trinity and the Sacramental Body of the Lord. This can be the condition of the possibility for the believer of other realities that might similarly be real, but which cannot be justified in terms of the *via aristotelica* alone. One thinks here in regard to the limit of the conclusions of Catherine Pickstock on transubstantiation as a condition of the possibility of all intelligibility; see her *After Writing: On the Liturgical Consummation of Philosophy* (Hoboken, NJ: Wiley Blackwell, 1997); and as regards other possible realities, but in an entirely different genre, see the “Inkling” Charles Williams in his astounding and entertaining 1931 novel, *The Place of the Lion* (Bibliothec Press 2012), also available through Project Gutenberg: <https://archive.org/details/in.ernet.dli.2015.225993>.

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**THEOLOGICAL SYSTEMATIZATION
AND THE ORDER BETWEEN
THE LITERAL AND ALLEGORICAL SENSES
OF SCRIPTURE**

David Francis Sherwood

The question of how Sacred Scripture should be read is ancient in sacred theology. As a deep understanding of Scripture is part of the foundation of the science of sacred theology, the method by which the Biblical text is understood is, in a sense, its first problem.¹ A failure to comprehend the proper relation between

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¹ On Scripture as the foundation of theology, see Denis Farkasfalvy, *Inspiration & Interpretation: A Theological Introduction to Sacred Scripture* (Washington, DC: The Catholic University of America Press, 2010), 141; Robert J. Woźniak, "An Emerging Theology Between Scripture and Metaphysics: Bonaventure, Aquinas and the Scriptural Foundation of Medieval Theology," in *Reading Sacred Scripture with Thomas Aquinas: Hermeneutical Tools, Theological Questions and New Perspectives*, ed. Piotr Roszak and Jürgen Vijgen (Turnhout, Belgium: Brepols, 2015), 417; *ibid.*, 421. On Biblical theology's methodology as a basic problem for sacred theology, see Wilhelmus G.B.M. Valkenberg, *Words of the Living God: Place and Function of Holy Scripture in the Theology of St. Thomas Aquinas*, vol. 6 (Leuven: Peeters, 2000), 220–27. Indeed, biblical theology cannot

the various modes of signifying in Scripture renders the truths of Scripture insusceptible to systematization with other truths. According to St. Thomas Aquinas, the synthesis of what is signified by Scripture (and the whole body of Revelation) with truths known by human reason is the core of the science of sacred theology.² Therefore, ignorance of how Scripture signifies precludes the very possibility of this theology, and leads either to an acceptance of Scripture without the ability to defend and explain it—a mere fideism—or, worse, to the rejection of Revelation as mere nonsense.³ As this problem is ancient, it is appropriate to evaluate it through the examples of the Patristic and Medieval Eras.

be separated from sacred theology. See Valkenberg, *Words of the Living God*, 9: “There is a considerable difference between the modern notions of ‘Scripture’ and ‘theology’ and Aquinas’s notions of *sacra Scriptura* and *sacra doctrina* . . . For Thomas Aquinas, this difference is not so clear. It is remarkable that he seems to use the notions of *sacra Scriptura* and *sacra doctrina* interchangeably in his mature reflections on theological method.” For how this Scholastic interchange included philosophy, see Mark J. Clark, “Peter Lombard, Stephen Langton, and the School of Paris the Making of the Twelfth-Century Scholastic Biblical Tradition,” *Traditio* 72 (2017): 171–274, doi:10.1017/tdo.2017.2, 202–206; 228–31, 251–65; Mark J. Clark, “An Early Version of Peter Lombard’s Lectures on the *Sentences*,” *Traditio* 74 (2019): 223–47, doi:10.1017/tdo.2019.2, 236–38; 247.

2 See Thomas Aquinas, *Summa Theologiae* I, q. 1, as. 1–3, 5. For more about Scripture’s place in theology, see *Dei Verbum*, §24.

3 For examples of the failures in perceiving the doctrines of the faith based in difficulties surrounding theological exegesis: David A. Michelson, *The Practical Christology of Philoxenos of Mabbug* (New York, NY: Oxford University Press, 2014), especially 113–43; Jeremy Holmes, “Participation and the Meaning of Scripture,” in *Reading Sacred Scripture with Thomas Aquinas*, 91. For the dichotomy of fideism and rejection of Revelation due to such misunderstandings: John Paul II, *Fides et Ratio*, §48. On the failure of fideism: Lluís Clavell, “Philosophy and Sacred Text: A Mutual Hermeneutical Help; The Case of Exodus 3,14,” in *Reading Sacred Scripture with Thomas Aquinas*, 464–65. On the rejection of Revelation: Celsus, *On True Doctrine: A Discourse Against the Christians*, trans. R. Joseph Hoffmann (New York, NY: Oxford University Press, 1987); Christopher Hitchens, *God Is Not Great: How Religion Poisons Everything* (New York, NY: Twelve Books, 2007), especially 109–22; John Paul II, *Fides et Ratio*, §46.

The Patristic Era was often divided between the Antiochian and Alexandrian Schools.⁴ The Antiochian school practiced a form of primarily literal exegesis of Scripture, where it was read solely as a repository of religious history and narratives, albeit one inspired by the Holy Spirit. As simply such a repository, the text's significance was self-contained, and Scripture did not signify realities that subsisted throughout time. The Alexandrian school, however, practiced a form of exegesis where Scripture was understood to signify primarily eternal spiritual realities through the medium of historical and narrative elements. This emphasis set aside the histories and narratives as relatively unimportant. While there are positives to both ancient schools, neither of them offered a holistic and integrated methodology for understanding what is signified by the Biblical text.⁵ Therefore, the order between the literal and allegorical senses was often obscured, with the Word of God seemingly divided against itself. This order was later developed by theologians who were able to integrate these two senses of Scripture in a clear way by distinguishing the various modes by which truths are signified.⁶ In the Medieval Era, an eminent example of such an

4 For a similar, though modern, debate on contemporary exegesis as preferring the historical-critical method (which is similar to the literal sense) over spiritual (primarily allegorical) exegesis and their impact on the health of theology as a whole, see Michael Cahill, "The History of Exegesis and Our Theological Future," *Theological Studies* 61.2 (June 2000): 332-47; Marie Anne Mayeski, "Quaestio Disputata: Catholic Theology and the History of Exegesis," *Theological Studies* 62.1 (March 2001): 140-53.

5 For these positives, see Denis Farkasfalvy, *Inspiration & Interpretation* 120-39; Joseph G. Prior, "The Roots of the Historical Critical Method in Patristic and Medieval Literature," in *The Historical Critical Method in Catholic Exegesis*, vol. 50 (Roma: Editrice Pontificia Università Gregoriana, 2001), 45-87; Joseph A. Fitzmyer, *The Interpretation of Scripture: In Defense of the Historical-Critical Method* (Mahwah, NJ: Paulist Press, 2008).

6 See Henri de Lubac, "Theology, Scripture, and the Fourfold Sense," in *Medieval Exegesis, Volume 1: The Four Senses of Scripture*, trans. Mark Sebanc (Grand Rapids, MI: William B. Eerdmans, 1998), 15-74.

integration is provided by St. Thomas Aquinas, “the last great representative of patristic-medieval exegesis.”⁷ He did this by identifying the direct signifier of each Scriptural sense, and by showing how what is signified allegorically inherently depends on what is signified literally.

This paper traces the general views of the literal and allegorical senses that the early Antiochian and Alexandrian theologians developed. Next, Aquinas’s position on the literal and allegorical senses is discussed, drawing primarily from his *Summa Theologiae*. Then, how his theory reconciles the Antiochian’s view of the literal and the Alexandrian’s view of the allegorical is explained. In conclusion, this historical development of exegetical methodology is summarized within the context of Revelation’s place in Catholic theology.⁸

The Antiochian School: Diodore and Theodore

This section will focus on Diodore of Tarsus (died c. 392 AD) and Theodore of Mopsuestia (c. 350 – c. 428 AD).⁹ The historical context in which they wrote is relevant. Diodore’s life overlapped with that of Emperor Julian “the Apostate” (331 – 363 AD) and

7 Matthew Levering, *Participatory Biblical Exegesis: A Theology of Biblical Interpretation* (Notre Dame, IN: University of Notre Dame Press, 2008), 25. See Farkasfalvy, *Inspiration & Interpretation*, 147–48.

8 It should be noted that the ancient and medieval authors did not consistently divide the spiritual senses into their different kinds, though the tropological sense was always kept separate. The allegorical and anagogical were often treated as one sense, since both are the spiritual significations of realities not contained in the literal words of the Biblical text. This paper focuses on the allegorical sense, though often in a way that does not exclude the anagogical, since they relate to the literal sense in similar ways.

9 For dates, see John Chapman, “Diodorus of Tarsus,” in *The Catholic Encyclopedia* (New York, NY: Robert Appleton Company, 1909), <https://www.newadvent.org/cathen/05008a.htm>; Chrysostom Baur, “Theodore of Mopsuestia,” in *The Catholic Encyclopedia* (New York, NY: Robert Appleton Company, 1912), <https://www.newadvent.org/cathen/14571b.htm>.

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Diodore was already a presbyter of the Church of Antioch when Emperor Julian held court in Antioch.¹⁰ At this time Julian publicly mocked the Church, both in word and writing, because of the apparent mythological nature of Scripture's literal narrative and because of its apparent discrepancies.¹¹ Diodore came to the defense of Scripture against the Emperor, largely by attempting to correct Julian's misunderstanding of the literal sense of the Biblical text and by resolving the apparent difficulties the text presented.¹² In doing so, Diodore restricted the use of allegory to the historical order where strictly historical occurrences of one era can be compared to others of the same or a different era.¹³ Diodore does this based on his understanding of St. Paul's own method in Galatians 4:22–31. As John Behr puts it,

Diodore insists that despite using the word “allegory,” Paul does something quite different. . . [W]ith the *historia* laid out, [Paul] theorizes and relates the things lying before him to higher things. This contemplation the apostle calls “allegory.” The prior *historia* remains intact, and the apostle “theorizes” or contemplates other similar realities, that is, compares it to similar things, events or figures, in other *historia*.¹⁴

Thus, allegory for Diodore, and purportedly St. Paul, is a kind of comparison between essentially literal narratives.

St. Paul's own text in Galatians should be quoted here to

¹⁰ For the dates of Julian's life, see Karl Hoerber, “Julian the Apostate,” in *The Catholic Encyclopedia* (New York, NY: Robert Appleton Company, 1910), <https://www.newadvent.org/cathen/08558b.htm>. For Diodore's and Julian's shared history, see John Behr, *The Case Against Diodore and Theodore: Texts and Contexts* (New York: Oxford University Press, 2011), 51–52.

¹¹ See Frederick G. McLeod, *Theodore of Mopsuestia* (New York, NY: Routledge, 2009), 20; Behr, *Diodore and Theodore*, 51–52; *ibid.*, 66–69.

¹² See Behr, *Diodore and Theodore*, 69–71.

¹³ See Behr, *Diodore and Theodore*, 70–71.

¹⁴ Behr, *Diodore and Theodore*, 70–71.

show how his use of the term “allegory” is capable of supporting Diodore’s understanding of the issue.

For it is written that Abraham had two sons, one by a slave and one by a free woman. But the son of the slave was born according to the flesh, the son of the free woman through promise. Now this is an allegory [ἀλληγορούμενα]: these women are two covenants. One is from Mount Sinai, bearing children for slavery; she is Hagar. Now Hagar is Mount Sinai in Arabia; she corresponds to the present Jerusalem, for she is in slavery with her children. But the Jerusalem above is free, and she is our mother. (Gal. 4:22-27 RSVCE).

St. Paul compares Hagar and Sarah to the worldly Jerusalem and heavenly Jerusalem, respectively, through comparing two historical realities (Sarah and Hagar) with two other historical realities—being born into bondage as known within the history of the worldly travails of Jerusalem and Israel, and being born into freedom in the promised “Jerusalem” to come. Diodore did not see St. Paul as explaining the spiritual sense of the book of Genesis concerning Abraham’s two wives. Rather, Diodore only saw the comparison between people and events that exist on a human timeline—Hagar, Sarah, the historical Jerusalem, and a future state also named “Jerusalem.” As comparisons, the “theorizing” that Diodore ascribes to Paul, and which Diodore himself emulates, does not go beyond the actual texts in question. Narratives are merely set side-by-side.

Diodore, further, downgrades the most confusing literal parts of Scripture to “enigmas” and does not call them allegories.¹⁵ Because he restricted allegory in this way, Diodore was

¹⁵ Behr, *Diodore and Theodore*, 71. Comparison between Diodore’s ideas about “theories” and “enigmas” as categories of literal exegesis and St. Thomas Aquinas’s understanding of the etiological, analogical, and parabolic senses within the literal sense of Scripture could be possible. For a brief categorization

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forced to conclude that there is not an inherently essential order between the Testaments that is grounded upon the person of Christ. Behr points out,

As such, the *historia* recounted by the prophets and the apostles, the Old Testament and the New respectively, are essentially about different realities, and any connection between them beyond the contemplation of similarities, such as opening an enigma in the Old Testament, can only be done by the Lord himself.¹⁶

Therefore, for Diodore (and his younger contemporary Theodore of Mopsuestia), only certain individual similarities can be found between the Testaments, specifically where the *historia* of one overlap with the *historia* of the other.¹⁷ This is the only way that a Scriptural text can be seen as “going out from itself”—when reading back into an older text certain truths that were included in a later one. This past event may then be seen as a *typos* of the later event.¹⁸ However, based on the words of Behr above, these similarities are not based in an inherent ordination of the Old Testament event to the New. It is, rather, a *post hoc* realization. This kind of movement beyond an individual text is, also, a rarity

of these, see Thomas Aquinas, *Summa Theologiae*, I, q. 1, a. 10, ad 2.

¹⁶ Behr, *Diodore and Theodore*, 72.

¹⁷ See Behr, *Diodore and Theodore*, 78. This should not be interpreted as meaning that Theodore neither allowed for anything Christo-centric in the Old Testament nor for a movement between the Testaments. Indeed, his understanding of Scripture has been well-defended as “christo-teleological,” on account of his excellent knowledge of Salvation History and its prophecies (though he accepted fewer prophecies than would many ancient exegetes). Rather, Theodore denied that the things and events of the past were themselves contemporaneously signs of something yet to come.: Hauna T. Ondrey, *The Minor Prophets as Christian Scripture in the Commentaries of Theodore of Mopsuestia and Cyril of Alexandria* (New York: Oxford University Press, 2018), 154.

¹⁸ See Behr, *Diodore and Theodore*, 74–75; Charles Kannengiesser, *Handbook of Patristic Exegesis*, vol. 1, 2 vols. of *The Bible in Ancient Christianity* (Boston, MA: Brill, 2004), 220.

and only for explicit prophecies—it is not characteristic of the two Testaments as a whole.¹⁹ By restricting the spiritual connections inherent in Scripture in this way, Diodore, and Theodore following him, actively narrowed Biblical exegesis to the explicit words of each passage, even when an enigma.

Their reaction to the environment created by Julian, alongside other causes, culminated in an undue rejection of real allegory and in the creation of their own method of exegesis.²⁰ This method both gave pride of place to the literal sense and understood only the literal sense as the product of the Divine Mind, which had to be defended as such.²¹ Exegesis that is not explaining what this Divine writing literally says is a human invention. As such, Theodore claimed that it is presumptuous to apply any allegory to the text. As he himself puts it,

But then to twist the entire narrative or to change the written text, how is this not completely insane and evident wickedness? For, if one can rightly assert without shame, this wanton frenzy [for allegory] is like that

¹⁹ See Behr, *Diodore and Theodore*, 72; 78–79.

²⁰ See Behr, *Diodore and Theodore*, 59; 81; for a moderating literalism that still rejects most allegory, see Paul B. Clayton, “The Mature Theodoret, 433–45,” in *The Christology of Theodoret of Cyrus: Antiochene Christology from the Council of Ephesus (431) to the Council of Chalcedon (451)* (New York: Oxford University Press, 2007), especially 170.

²¹ See McLeod, *Theodore of Mopsuestia*, 18: “If one grants that the Spirit is revealing God’s will in the Bible, then Theodore reasoned that one ought to seek the Spirit’s intent within the actual words He has inspired. He concludes from this that there is no instance where an allegorical interpretation is justified, unless it is inherently connected to the text.” For the proper importance of the literal sense as intended by God, see *Dei Verbum*, §12; the Second Vatican Council stressed the importance of the literal sense and its inherent clarity. This very clarity is why dogmatic arguments from Scripture generally follow the literal sense: “The Jewish People and Their Sacred Scriptures in the Christian Bible,” in *The Church and the Bible: Official Documents of the Catholic Church*, 2nd ed., ed. Dennis J. Murphy (Bangalore: St. Paul’s Press, 2007), 858; Levering, *Participatory Biblical Exegesis*, 91–92.

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[shown] to [the pagan] idols. [*lacuna*] They introduce [interpretations] that do not agree at all—not even in a single instance—with what is written.²²

Here, Theodore asserts that there can be no connection to a spiritual meaning that is not literally and openly contained in the words of the text itself.²³

This rejection of allegorical exegesis, insofar as such exegesis does not relay what is directly written²⁴ and because only the text itself is intended by the Holy Spirit,²⁵ assumes that Scripture is self-contained. There is no other signification beyond the explicit words. This is Theodore's precise accusation:

As we have abundantly shown in our interpretation, [Paul] did not employ an allegorical interpretation in order to rise above its historical narrative. . . For, [in] an allegory, someone draws out of the text another meaning that transcends the meaning of the text, in order to demonstrate thereby [a meaning] that someone maintains has been implanted there.²⁶

What Theodore meant by “historical narrative” is not clear. The text of Scripture on which Theodore (and Diodore) focused could be historiography, quasi-historical narrative designed to

22 Theodore of Mopsuestia, “In Opposition to the Allegorists,” in McLeod, *Theodore of Mopsuestia*, 75; see also McLeod, *Theodore of Mopsuestia*, 19.

23 When taken to further extremes, this would even produce literalists so strict that nothing more than what Scripture already stated could be claimed, at least on doctrinal matters, to the point of denying the liceity of commentaries. See Michelson, *Philoxenos of Mabbug*, 129: “Similar to Antiochene exegesis, Philoxenos advocated a strict literal reading. With regard to the Incarnation, he allowed no wavering from what he considered to be the immediate reading of the text: ‘. . . the expressions which are said about the faith [in scripture] do not allow commentary.’”

24 See Theodore, “Opposition,” 75.

25 See McLeod, *Theodore of Mopsuestia*, 19.

26 Theodore, “Opposition,” 76.

teach, prayers, or a form of novella. Despite this lack of clarity over what sense of “historical” Theodore spoke of, this repudiation of the allegory in the above quotes “can primarily be seen as a delimitation against an allegorical interpretation,” according to a leading expert in Patristic exegesis.²⁷

In summary, Diodore and Theodore maintained that, beyond the literal sense, there was nothing in Scripture; finding more would be blasphemy. This reduced the word of God to historical narratives and the comparisons thereof.²⁸ As such, the words of Scripture are closed in on their own signification, such that they *cannot* signify beyond what a typical person would likely grasp in them.²⁹

27 Kannengiesser, *Handbook*, 215. For example, Kannengiesser, *Handbook*, 173–74: “A strong sense for the metaphorical *littera*,” i.e., the kind of metaphorical trope that belongs to the literal sense, “is shown by Diodore of Tarsus, who certainly was not inclined to confuse it with allegorical exegesis. In his commentary on Psalm 1, from verse to verse, he clarifies one metaphor after another. . . Verse by verse the poetic images are turned into the prosaic, an exegesis that is no longer metaphorical at all, but, as Diodore terms it, ‘moralizing’— ἠθικός.” Diodore even had the tendency to put tropes belonging to the literal sense into plain language. Much more so, then, did he and his intellectual heirs narrow the Scriptural narratives to their strict literal sense. Again, Ondrey, *Minor Prophets*, 158–59: Prophecy perceived by a spiritual reading of the Scriptural text is excluded. Prophecy’s value is relegated to its moral and pedagogical use—after its fulfillment. The very recognition that there was a prophecy is discovered after the fact, by paying attention to its use of hyperbole which was otherwise inexplicable before the fulfillment of the prophecy.

28 Even when they did not close Scripture off from more spiritual interpretations, later theologians indebted to them would further their original methodology to an even more narrow literalism. See Michelson, *Philoxenos of Mabbug*, 129.

29 See Kannengiesser, *Handbook*, 216–17. Note that it is anachronistic to treat this theory as the common system of the theologians in and surrounding Antioch. To say nothing of St. John Chrysostom, exegetes such as Theodoret of Cyrus were opposed to this nearly singular usage of the literal sense that prejudiced figures and prophecies that required an allegorical reading.

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The Alexandrian School: Origen

Origen Adamantius (c. 185 – c. 253),³⁰ the Alexandrian School's greatest exegete, had a similar understanding of the literal sense—though he did not emphasize it to the degree that the Antiochians did. As it was indisputable that the text of Scripture was a product of the Holy Spirit's own authorship, the literal sense was of abiding importance. As Henri de Lubac describes Origen's view, "If the reality of the visible world is a figure for the invisible world, then the reality of biblical history will also be a figure for the things of salvation and will serve as their 'foundation.'"³¹ Origen considered the protection and connecting of the things of the visible world, like the literal/historical sense, to be the first duty of the exegete.³² His respect for the text itself, the *littera*, is clear in a Christological analogy that he gives:

So also when the Word of God was brought to humans through the Prophets and the Lawgiver, it was not brought without proper clothing. For just as there it was covered with the veil of flesh, so here with the veil of the letter, so that indeed the letter is seen as flesh.³³

Scripture and the Church require the literal sense of the text just as the humanity of Jesus Christ is prerequisite for humanity's salvation.³⁴ Therefore, Origen said, "every word of the Scriptures

³⁰ See Mark J. Edwards, "Origen," in *Stanford Encyclopedia of Philosophy* (Stanford University, 2022), <https://plato.stanford.edu/entries/origen/>.

³¹ Henri de Lubac, *History and Spirit: The Understanding of Scripture According to Origen* (San Francisco, CA: Ignatius Press, 2007), 104.

³² An example of this is how Origen consistently defended the literal sense of Scripture when it came to the miracles, the Creation narrative, and the Deluge against attacks by pagans who rejected them as literal impossibilities: de Lubac, *History and Spirit*, 106-108.

³³ Origen, *Homilies on Leviticus*, trans. Gary Wayne Barkley, vol. 83 (Washington, DC: The Catholic University of America Press, 2005), 29.

³⁴ See de Lubac, *History and Spirit*, 105.

has its meaning.”³⁵

Although this foundational respect for the literal sense of Scripture is ubiquitous in Origen’s writings, it is not absolute. Origen says,

[F]or occasionally the records taken in a literal sense are not true, but actually absurd and impossible, and even with the history that actually happened and the legislation that is in its literal sense useful there are other matters interwoven.³⁶

This is a departure from the Patristic norm. Indeed, it is controversial, both then and now (though there are today certainly defenders of Origen on this front),³⁷ especially since it was a practice of the early Church to use difficulties uncovered in Scripture as opportunities for reflecting on the mysteries of God, not as grounds for any kind of a refutation of the literal text, as Origen suggested.³⁸ Much of Origen’s reaction against what is

35 Origen, *Homilies on Luke*, trans. Joseph T. Lienhard (Washington, DC: The Catholic University of America, 2009), 145. Indeed, Origen here extends the power of the literal sense of Scripture and the value of individual words all the way to the definite article of the Gospel’s Greek text.

36 Origen, *On First Principles*, trans. G. W. Butterworth (Gloucester, MA: Peter Smith, 1973), 294 (4.3.4). When quoting from *On First Principles*, the translation from the Greek text has been preferred. See de Lubac, *History and Spirit*, 111–12.

37 See Farkasfalvy, *Inspiration & Interpretation*, 120–21. Defenders of Origen, such as Farkasfalvy, make excellent points about Origen’s holistic exegesis. The fact remains that Origen’s style often sweeps so swiftly over the literal sense of Scripture or deals with spiritual matters pertaining to the text even when he is working *more* literally, that the impression of Origen as mainly an allegorist continues to persist. As de Lubac says above, Origen’s exegesis, for all its strengths, would prove a problematic methodological synthesis.

38 See de Lubac, *History and Spirit*, 115; Origen, *On First Principles*, 285–86 (4.2.9). Origen speaks of these very kinds of difficulties as “stumbling-blocks” recognized by all the Fathers. These generally are spoken of as protecting the difficult truths of Scripture from pagans, heretics, and others who might misuse Scripture. Origen goes farther than just saying that Scripture contains

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literally in the narrative of Scripture likely arose from his disinclination to systematization and the apparent rigidity of his vocabulary. In de Lubac's assessment,

often . . . the form of Origen's reasoning is more provocative and lends itself to misunderstandings. In any case, if systematized, it is assuredly open to criticism. It is fair to judge that the consideration of the spiritual meaning is introduced into it in an artificial and rather petty way, "from outside."³⁹

Origen was not interested in giving a clear account of how he understood the literal text or how he moved beyond it,⁴⁰ especially when the text was so problematic to him that he went so far as to say that the literal sense was false.⁴¹ He also thought one reaches the more valuable spiritual sense of a text more

stumbling-blocks, however, and says that at times Scripture has mistruths in it.
39 De Lubac, *History and Spirit*, 125. While de Lubac is here speaking of Origen's exegesis on Genesis 13, the observation stands in general. Moreover, such instances tend toward a certain biblical utilitarianism. See Jean Daniélou, *Gospel Message and Hellenistic Culture*, trans. John Austin Baker (Philadelphia, PA: The Westminster Press, 1973), 285: "The literal meaning is taken as corresponding to a stage in the spiritual life; it is therefore of use only where the letter of the text is edifying in itself. On the other hand, wherever this literal meaning is shocking or merely disputed, it is necessary to have recourse to moral allegorism of Gnostic *θεωρία*, both of which, therefore, will always be in requisition. For Origen, the practice of exegesis is marked by the quality of *ὠφέλεια*, utility."

40 See de Lubac, *History and Spirit*, 160–61; Daniélou, *Gospel Message and Hellenistic Culture*, 284; Origen, *On First Principles*, 275–77 (4.2.4). Note that it is not claimed that Origen nowhere describes a movement from the literal sense to the moral sense to the allegorical sense. Rather, Origen does not explain this in *precise and universal scientific terms*. Instead, Origen prefers to give a flowing description of this threefold motion of exegetical ascent in biblical and spiritual images and is comfortable ignoring any greater precision.

41 See Hermann J. Vogt, "Origen of Alexandria (185–253)," in *Handbook of Patristic Exegesis*, ed. Charles Kannengiesser, vol. 1, *The Bible in Ancient Christianity*, 536–74, 546.

swiftly when setting aside the literal sense as relatively unimportant.⁴² Therefore, Origen's acceptance of the literal sense is somewhat equivocal, though this lack is more due to an imperfect or nascent methodology than to a quasi-dogmatic judgment about the Biblical texts.⁴³ In this respect, Origen contributed to the Patristic failures in systematization.⁴⁴

Despite this, Origen welcomed a more open form of literal exegesis than the Antiochian school. For Origen, the words of Scripture are "divinely inspired and . . . were spoken with all power and authority."⁴⁵ Therefore, as de Lubac puts it, "Everything that was written is mystery. . . [T]his mysterious character of the Bible is not affirmed to the detriment of its historical character."⁴⁶ The Holy Spirit wrote such that the literal text would have mysteries related to its signification.⁴⁷ That the literal points beyond itself to the spiritual was manifest to Origen. As such, he wrote,

Now the reason why all those we have mentioned hold false opinions and make impious assertions about God appears to be this, that Scripture is not understood in its

42 See de Lubac, *History and Spirit*, 170–71: "Most often, he passes immediately from the historical sense, briefly recalled, to the 'interior' sense on which he dwells: he hastens to come 'ad interiora mysteria, ad interiora doctrinae spiritalis.'"

43 On Origen's equivocal use of the literal sense: Origen, *On First Principles*, 290–91 (4.3.2). On the antiquity of Origen's exegetical system, see Farkasfalvy, *Inspiration & Interpretation*, 120–21.

44 See Charles Kannengiesser, "A Key for the Future of Patristics: The 'Senses' of Scripture," in *In Dominico Eloquio—In Lordly Eloquence*, ed. Paul M. Blowers et al. (Grand Rapids, MI: William B. Eerdmans, 2002), 103: "[De Lubac] . . . made it clear that such a systematic theory of scriptural senses was not developed by the patristic authors themselves. . . [T]hey provided the essential elements for it, but they lacked the critical distance from the biblical text that would have allowed them to systematize their own hermeneutics."

45 Origen, *On First Principles*, 264 (4.1.6).

46 De Lubac, *History and Spirit*, 103–104.

47 See Origen, *On First Principles*, 272 (4.2.2); Vogt, "Origen of Alexandria," 547.

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spiritual sense, but is interpreted according to the bare letter. . . That there are certain mystical revelations made known through the divine scriptures is believed by all, even by the simplest of those who are adherents of the word. . .⁴⁸

Therefore, when he said that “every word of the Scriptures has its meaning,” he both dignified the immediate sense of the words and demanded that they all have a further spiritual significance.⁴⁹

For Origen, the spiritual interpretation of Scripture is natural to the text since Providence intentionally ordered the events and words so as to point beyond themselves. Without the spiritual senses, the Divine pedagogy would be frustrated as so much of Scripture would remain “merely” literal and ignore the Mysteries of Revelation. To teach the faith for the ongoing life of the Church, the Biblical events and words must always point beyond themselves to these Mysteries. As one Origen scholar puts it,

For Origen, there was a twofold pedagogy of the Logos. The original, historical teaching of the Logos was found in the literal sense of Scripture, whereas the contemporary pedagogy of this Logos resided in the spiritual sense and was perpetually directed toward new audiences. The task of the allegorical exegete was to reenact the ancient teaching activity of the Logos for a contemporary audience. . . By arranging these contemporary teachings so that they correspond well to the differing needs and levels of hearers, Origen’s aim as an exegete was to facilitate “a progression of stages in the Christian’s progress

48 Origen, *On First Principles*, 271–72 (4.2.2).

49 Origen, *Homilies on Luke*, 145. See Daniélou, *Gospel Message*, 274: “He is convinced that every detail of the scriptural text, in addition to its literal sense, has other significations; and therefore he searches to the utmost of his power for the truth of which this detail is the type or the allegory.”

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toward perfection.” In short, biblical interpretation was principally “the mediation of Christ’s redemptive teaching activity to the hearer.”⁵⁰

To Origen, the essence of words is pedagogical. They may rightly demand an ordered growth in their audience’s understanding through layered meaning all ordered toward a single end. In the case of Scripture, Origen emphasizes this end as the saving knowledge of the Logos:

And in the first place we must point out that the aim of the Spirit who by the providence of God through the Word . . . enlightened the servants of the truth . . . , was pre-eminently concerned with the unspeakable mysteries connected with the affairs of men . . . —his purpose being that the man who is capable of being taught might by “searching out” and devoting himself to the “deep things” revealed in the spiritual meaning of the words become partaker of all the doctrines of the Spirit’s councils.⁵¹

Therefore, Scripture’s significance has a certain “teleology” that makes possible an ordered movement beyond its literal words—nor should such teleology be surprising for divinely inspired texts, which have a pedagogical use under Divine Providence. As the spiritual is the end to which the literal points, these spiritual mysteries are the main content of Scripture. Yet it remains true that Origen left this teleological order in a disordered state since he neither completely accepted the literal sense nor explained the movement between these senses.

50 Peter W. Martens, *Origen and Scripture: The Contours of the Exegetical Life* (New York, NY: Oxford University Press, 2012), 10. Martens is quoting Karen Jo Torgesen, *Hermeneutical Procedure and Theological Structure in Origen’s Exegesis* (Berlin: De Gruyter, 1985), 12; *ibid.*, 14.

51 Origen, *On First Principles*, 282 (4.2.7).

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*The Order Between the Literal and Allegorical
in Thomas Aquinas*

It is not surprising that this state of affairs in Biblical exegesis is vague and confused. What is the precise relation between the literal and the allegorical? How does one pass from what a word literally means to what it allegorically may symbolize? It is easy to recognize that most theologians have used these senses of Scripture, but their rigorous systemization has not been universal.⁵² Thus, the above summaries are in no way intended to exhaust the methods that can be found by a full reading of the Church Fathers and other early Ecclesiastical authors. Nonetheless these authors failed to systematically present the order between the literal meaning of the written words and their spiritual content. This task was taken up by later authors.

The medieval West, for example, already tended to systematize, and this tendency included finding an order among these senses of Scripture. One of the greatest systematic theologians during this time was the Universal Doctor, St. Thomas Aquinas (1225/27 – 1274 AD).⁵³ Although Aquinas did not write a distinct treatise on Scriptural exegesis, he is clear in the few places in which he addresses the issue. In particular, near the beginning of the *Summa Theologiae*, he states,

The author of Holy Writ is God, in whose power it is to

52 For example, Mary B. Cunningham, “The Interpretation of the New Testament in Byzantine Preaching: Mediating an Encounter with the Word,” in *The New Testament in Byzantium*, ed. Derek Krueger and Robert S. Nelson (Washington DC: Dumbarton Oaks Research Library and Collection, 2016), 192: “Following Origen, Byzantine exegetes sought above all to discern the sense or ‘mind’ (*dianoia*) of scripture. . . While avoiding any strict idea of ‘four senses’ . . . Byzantine preachers nevertheless adopted methods that fell roughly into the same categories, although they may not have formally identified them as such.”

53 For dates, see Daniel Kennedy, “St. Thomas Aquinas,” in *The Catholic Encyclopedia* (New York, NY: Robert Appleton Company, 1912), <https://www.newadvent.org/cathen/14663b.htm>.

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signify His meaning, not by words only (as man also can do), but also by things themselves. So, whereas in every other science things are signified by words, this science has the property, that the things signified by the words have themselves also a signification.⁵⁴

Here, Aquinas recognizes that a distinction in kinds of signs must be made when reading the Biblical texts, whereas too few previous theologians methodologically asked to what genus of sign allegorical signifiers directly belonged—as distinct from the signifiers of the literal sense.⁵⁵ Aquinas explicitly recognizes that there are two kinds of sign operative in the narratives of Scripture, the words themselves and those realities, which are prior in the order of nature to the words. Because he made this distinction, Aquinas was able to assign the literal sense to the *words* contained *in* Scripture and the allegorical sense (as well as the other spiritual senses) to the *things* signified *through* Scripture.⁵⁶ Therefore, his account clearly set the boundaries

54 Aquinas, *Summa Theologiae* I, q. 1, a. 10, c.; translation taken from *Summa Theologiae Prima Pars*, 1–49, ed. John Mortensen and Enrique Alarcón, trans. Laurence Shapcote (Lander, WY: The Aquinas Institute for the Study of Sacred Doctrine, 2012). See also Thomas Aquinas, “Quodlibetal 7, Question 6, On the Senses of Sacred Scripture,” in *Eros and Allegory: Medieval Exegesis on the Song of Songs*, ed. and trans. Denys Turner (Kalamazoo, MI: Cistercian Publications, 1995), 343–55, 344 (*Quod. 7, q. 6, a. 1, resp.*).

55 See Origen, *On First Principles*, 286 (4.2.9). Origen usually operated in his exegesis in this swift way, but he was clearer in his systematic work.

56 See Aquinas, *Summa Theologiae* I, q. 1, a. 9, c.; Augustine, *On Christian Doctrine*, trans. D. W. Robertson, Jr. (Upper Saddle River, NJ: Prentice Hall Inc., 1997), 102–104; Levering, *Participatory Biblical Exegesis*, 71. The allegorical sense, therefore, is distinct from the many literary tropes, including literary allegory. The exegetical problems surrounding these may, therefore, be relegated to the literal sense. See Timothy F. Bellamah, “The Interpretation of a Contemplative: Thomas’s *Commentary Super Iohannem*,” in *Reading Sacred Scripture with Thomas Aquinas*, 242: “Thomas and his contemporaries considered literary figures as falling within the human author’s intention, and thus as belonging to the literal sense, wherein words signify realities (*res*). No longer

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of the literal sense of Scripture while also giving a clear springboard to the spiritual senses.

An example of this exegesis may be found in the Ezekiel 44:2,

And he said to me, “This gate shall remain shut; it shall not be opened, and no one shall enter by it; for the LORD, the God of Israel, has entered by it; therefore it shall remain shut.” (RSVCE)

This line literally speaks of the east gate to the Temple in Jerusalem and that it has been sealed in a vision due to the mysterious fact that God had made use of it when entering or exiting the Temple. While this reading does satisfy the words found in Scripture, they do not seem to be of any purpose. However, the reality of the Lord’s passage through his highest sanctified dwelling does serve a purpose in pointing to a further reality in the New Testament. Here, Christ Jesus passed through his Blessed Mother when she gave birth to him while her virginity was kept intact—it was never opened and was kept shut, per Ezekiel’s words—denoting the historical and dogmatic fact of her perpetual virginity.⁵⁷ Thus, the words of the text of Ezekiel had a clear—though mysterious—literal sense and the reality spoken of through these words had another, less clear but more meaningful, spiritual sense.

Scripture’s ability to have a spiritual sense beyond the literal is unique because it is divinely inspired. As St. Thomas

obliged to relegate symbolic language to the realm of spiritual interpretation, commentators treated it as understood and intended by the human author.” Kannengiesser, *Handbook of Patristic Exegesis*, 173. Perhaps the failure to distinguish literary allegory from the spiritual-allegorical sense is why the high focus on verbal intricacies became characteristic of the Antiochene School; see Peter W. Martens, ed., *Adrian’s Introduction to the Divine Scriptures: An Antiochene Handbook for Scriptural Interpretation* (New York: Oxford University Press, 2017).

⁵⁷ See Paul Haffner, *The Mystery of Mary* (Chicago, IL: Hillenbrand Books, 2004), 150-59.

explains,

Whereas in every other science things are signified by words, this science has the property, that the things signified by the words have themselves also a signification.⁵⁸

As the realities behind the Biblical texts are themselves susceptible to the Creator's providential and teleological ordering, they themselves can point to spiritual truths that had not occurred when the text had originally been composed. Indeed, these signifiers are the ultimate reason why Biblical texts are important beyond their hortative use. As one Thomistic scholar puts it,

Aquinas has only one hermeneutical key in his interpretation of Scripture: in a systematic-theological context, the texts of Scripture are important because they tell us something about God, who is the primary author of Scripture.⁵⁹

As God himself is beyond the sensible/comprehensible world, these signifiers must have a spiritual meaning that organically proceeds from the text itself. This spiritual inclination is, therefore, in the signifiers (i.e., things and events) that are themselves signified through the words and narratives of Scripture.⁶⁰

More specifically, the allegorical sense—as distinct from the moral and anagogical senses—is how the things and events of the Old Testament signify the things and events of the New Testament, particularly about the person of Christ and his Church.⁶¹ As such, the allegorical sense is not just the *post hoc*⁶²

58 Aquinas, *Summa Theologiae* I, q. 1, a. 10, c.

59 Valkenberg, "Words of the Living God," 223.

60 See Bellamah, "Interpretation," 250.

61 See Aquinas, *Summa Theologiae* I, q. 1, a. 10, c.

62 See McLeod, *Theodore of Mopsuestia*, 20: "Theodore briefly sums up what he believes to be what Paul actually means by 'allegory' in the present context: 'This is [what] (Paul) means . . . He calls an allegory the comparison that

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recognition of something secretly intended by God (as the Antiochians spoke of prophecy and their version of “allegory”), but it would have actually been why the historical things and events existed in the way that they were recorded in Scripture. Therefore, while the allegorical sense is dependent on the words of the Biblical text insofar as this sense is for the sake of the reader’s understanding, the signs that belong specifically to the allegorical sense are the very things and events signified by those words.⁶³ Thus, the allegorical sense directly depends upon the intrinsic signifying powers of realities that have been ordered providentially by God to point beyond themselves and only indirectly upon the Scriptural text that recorded these realities. For example, the manna in the desert, referred to in Exodus 16:4–36, was designed by God to intrinsically indicate the true Bread of Life in the sacrament of the Eucharist, as Christ taught in John 6:29–51. The allegorical sense of Exodus 16:4–36 is that “the bread of God is that which comes down from heaven, and gives life to the world” (John 6:33 RSVCE). Christ Jesus was always the one ultimately and providentially indicated by this manna since he is “the living bread which came down from heaven” and since it is of this bread that Christ said “[it] is my flesh” (John 6:51 RSVCE).

The allegorical sense must remain inherently connected to the literal sense. Indeed, since the realities and events of Scripture are only conveyed to the reader insofar as they are expressed within the words themselves, the allegorical sense depends on the literal sense as a summit upon a mountain. Thus, understanding that the Eucharist is signified allegorically

can be made between what happened long ago and what exists at present.”
Emphasis added.

⁶³ It should be mentioned that this system offers a much needed systematic clarity to Alexandrian methodology, since it locates the spiritual senses’ specific kind of signs behind the text of Scripture.

by the manna in Exodus 16 depends upon a right understanding of the important role that the manna has in the narrative of the Old Testament. They are ordered such that the literal sense is exegetically and pedagogically prior while remaining interconnected such that the literal cannot be without the spiritual senses. Together they produce, as one account puts it, a “theology grounded in historical understanding bearing the fruit of authentic spirituality.”⁶⁴ Therefore, the literal manna of Exodus is to be theologically understood as having historically existed for the sake of allegorically signifying Christ in the Eucharist.⁶⁵ Insofar as these senses’ order between themselves—the literal

64 Mayeski, “Quaestio Disputata,” 149.

65 For another example of their interconnectedness, see Bellamah, “Interpretation,” 251: “Situating it within his exposition of a narrative wherein Jesus himself provides an allegorical interpretation for the gift of manna to Moses and his people (Exodus 16, 4-35), Thomas intends to say something about the senses of Scripture. Within this framework, the literal sense of the Exodus text describing the manna in the desert is in some way caused by and derived from the spiritual sense given it by the letter of the Johannine text. So it is that without abandoning his principle that the spiritual senses are founded upon the literal, Thomas suggests that the literal sense is *aliquo modo* dependent upon the spiritual. The mode of this dependence comes into view in his subsequent remark that while corporeal food is converted into the nature of the body, spiritual food is not converted into the nature of the spirit, but being imperishable, it changes the eater’s spirit into itself. Applied to the senses of Scripture, this could be taken to mean that, as distinct from the spiritual sense, the literal is perishable. But this is not what Thomas has in mind. A fairer reading of his comment would indicate that the literal sense of Exodus 16 has been transformed and given new meaning by Jesus’ reinterpretation of it in John 6. By signifying directly the spiritual reality that is signified only allegorically in Exodus 16, the literal sense of John 6 is itself spiritual.” Bellamah here explains that Aquinas taught an interrelated dependence between the literal and spiritual senses. After the proclamation of the Gospels, the literal sense of the Old Testament inherently requires spiritual reading. Given how loaded the literal sense of the New Testament is, especially insofar as it fulfills the Old, it is inherently spiritual. While the literal sense of Scripture remains prior to the spiritual, these two senses of Scripture are so interconnected that they cannot do without each other.

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sense being prior to the allegorical while still depending upon the allegorical—does not entail a contradiction or impropriety,⁶⁶ the allegorical and literal senses of Scripture are compatible. In St. Thomas's words,

[W]hen there is a variety of senses such that one does not follow from the other, then a plurality of utterances results; but the spiritual sense is always based upon the literal and follows from it; hence, from the fact that sacred Scripture is interpreted both literally and in a spiritual way, no such plurality results.⁶⁷

In this way Aquinas takes to heart Theodore's concerns about an inordinate spiritualism that could use some device "in order to rise above [Scripture's] historical narrative."⁶⁸ The only licit move from the literal sense to the allegorical occurs when the exegete spiritually—and clearly—passes through the actual words explicitly found in the Biblical text.⁶⁹ In other words, the literal sense pertains directly to the words of the texts, and the allegorical sense goes beyond the words to directly pertain to the significance of the historical things and events, *insofar as these realities were already relayed by Scripture*.⁷⁰ The literal is ordered

66 See Thomas Aquinas, *Summa contra Gentiles* III, ch. 155.

67 Aquinas, "Quodlibetal 7, Question 6," in Turner, *Eros and Allegory*, 344 (*Quod. 7, q. 6, a. 1, resp.*).

68 Theodore, "Opposition," 76.

69 See Theodore, "Opposition," 78: "But more than all else, these [Scriptures] condemn him by proving that he cannot accurately assert and prove [his position]—not even in one of those [cases] where he has rashly dared to oppose the Scriptures." Unless the allegorical builds upon the literal, in the way described by Aquinas, the exegesis will fall outside the order of the inspired significance found in Scripture. If this proper order is observed, however, there will be no opposition and sufficient proof of continuity will be maintained.

70 See Mayeski, "Quaestio Disputata," 148–50: This should not be pedantically interpreted as if the realities of God and his Church must be explicitly and directly signified by a single word or sentence, but that this literal signification must be holistically connected to the spiritual senses (especially the allegorical/

to the allegorical so that Scripture can better signify the things of God the Word in His Incarnation, using a concrete means (this written format of Scripture) as revealed to concrete persons who otherwise would not be capable of perceiving such spiritual truths.⁷¹ God is signified best by the meeting of the various kinds of signs relayed by Scripture. Moreover, prudential care for Scripture would dictate that this ordered motion from literal to allegorical be made evident by the exegete with all proper precision.

Conclusion

The Antiochian School of exegesis narrowly focused on the literal sense of Scripture for understandable reasons. Given the intellectual and political environment of his day, Diodore of Tarsus

typological) so that these same realities could be relayed to the faithful. The Marian dogmas are good examples of this point. See Pablo Gadenz, “Overcoming the Hiatus between Exegesis and Theology: Guidance and Examples from Pope Benedict XVI,” in *Verbum Domini and the Complementarity of Exegesis and Theology*, ed. Scott Carl (Grand Rapids, MI: William B. Eerdmans, 2015), 55–56: “[T]he Marian dogmas are still related to Scripture, if Scripture is understood in its full significance. Specifically, with the mention of ‘typological’ interpretation, Ratzinger points to the importance of considering not only the literal sense but also the spiritual sense of Scripture. As Aquinas might say, this involves understanding not just the meaning of the words, but also the meaning of the *realities* signified by the words, even so as to *participate* in the power of those realities through faith, hope, and charity. In this regard, Ratzinger’s view seems to correspond to what Levering calls ‘participatory’ biblical interpretation.” See Joseph Ratzinger, *Daughter Zion: Meditations on the Church’s Marian Belief*, trans. John M. McDermott (San Francisco, CA: Ignatius Press, 1983), 67–68; 79–80; 81–82; Levering, *Participatory Biblical Exegesis*, 60–61.

⁷¹ See Aquinas, *Summa Theologiae* I, q. 12, a. 4, c.; q. 84, a. 1, c.; q. 88, a. 1, ad 2–3. As objects are known according to the knower’s own proper mode, here a knowledge above the human mode of knowing (the Revelation, in itself, found within Scripture according to its spiritual signification) is transmitted under signs both literary and in real things so that these objects may be received according to the human mode of knowledge through material connection.

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applied himself to saving the narrative of Scripture, which the Holy Spirit had inspired, from the attacks of the Emperor Julian. His attitude was transmitted to most of his students and intellectual heirs in and around Antioch. This method of exegesis was most infamously used by his younger contemporary Theodore of Mopsuestia, who made sure that the text of Scripture remained delineated against any allegorical understanding of what it signified. In this way, the meanings of the words were not themselves directed toward further related truths beyond the words' own particular meanings.⁷² Thus the defensive bias for the literal sense of Scripture became a sort of methodological doctrine. Their concern for the dignity and inspiration of the Biblical text itself, however, was praiseworthy.

Farther west in the Alexandrian School, Origen Adamantius understood the Biblical text as signifying the immutable things of God and his works in the Church. Due to this contemplative insight, Origen was often led either to pass over the literal sense too swiftly or to not attend to it at all. Indeed, at times he denied the reality or validity of the narrative. While he never tried to denigrate the importance of the literal sense, his methodological sidelining of the narrative took its toll. Given the fact that Origen was capable of systematization, as seen in his *On First Principles*, it is easy to understand

⁷² For an example of Antiochian exegesis taken to further theological extremes, see Michelson, "Proof Texts of the Ineffable: On Knowing Christ Through Scripture," in *Philoxenos of Mabbug*, 113–43. By proposing this theory of the literal sense, Theodore may have given the in direct occasion for others to create heresies more erroneous than what Nestorius had himself taught. In so doing, Theodore may have created the very situation where both the dyophysite church and the miaphysite Syriac heretics, who would arise after Theodore's death, would oppose him. Here, the Dyophysites accepted both the literal and spiritual senses of Scripture and condemned both Theodore and his denial of the allegorical reading of Scripture, at the Fifth Ecumenical Council, while the Miaphysites would accept Theodore's radical understanding of the literal sense and extend it to the point that Theodore himself was heretical.

why others have imagined his practice of setting aside the literal as part of his exegetical approach. Yet it is also true that Origen did not shut off the words of Scripture from any other signification, as Diodore and Theodore had. He correctly understood the Biblical text as spiritually inclined to meanings not immediately evident in the text. Indeed, his understanding of the spiritual sense was critical in the patristic-medieval age.

As a disciple of the Patristic Age, St. Thomas Aquinas provides a summarized systemization of the literal and allegorical senses of Scripture. He explicitly and consistently connected the words of Scripture with the actual things and events of which Scripture spoke. Because he distinguished the words from the things and events directly signified, Aquinas was able to distinguish the inherent order between these two signifiers: the significance of the words being inclined to a further significance of things and events. In this way, Aquinas expands the Antiochian school's understanding of Scripture so that the written narrative can signify beyond itself, but he does so in such a way that does not violate the nature of these words—themselves ultimately chosen by God through human authors. Aquinas also embraced Origen's movement beyond the literal narrative to spiritual realities, invoking the Holy Spirit's power and governance of the things of which Scripture speak. Thus, the allegorical sense is grounded in the substances and actions of Scriptural history, thereby giving Origen's spiritual sense the systematic foundation that it had lacked.⁷³

73 Here, the literal and allegorical senses of Scripture indicate related signs diversified according to their mode, i.e., literally of the text or some reality allegorically beyond the text. See Holmes, "Participation and the Meaning," 107: "The distinction between spiritual and literal lies not in what is signified but in how it is signified The literal and spiritual senses have different «modes» or ways of signifying, but the difference is not between signification by convention and signification by similarity, as it was for Augustine. According to Thomas, the literal sense uses signs that are only signs, whose whole purpose

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While Aquinas did not originate this exegetical understanding, he did give it precise methodological expression, thereby presenting the basis of a true “theological exegesis.”⁷⁴ This methodological clarity was both a kind of term to a historical development (insofar as Aquinas lived near the end of the progression from the Patristic era through the High Middle Ages)⁷⁵ and a boon to contemporary theologians.⁷⁶ This is critical to the sound understanding of Revelation and to the right scientific practice of theology, and therefore it is right to end by precisely enunciating these two senses of Scripture in their openness to each other. First, the literal sense is the meaning of the *words* written by the human, though inspired, author. Second, the allegorical sense is the meaning of the providentially ordered *realities* that are signified through these same words, the majority of which are found in the writings of the Old Testament and signify something proper to the New Testament and the Church. Providentially, therefore, the words of Scripture literally and directly signify those realities, which inherently and naturally go on to signify Christ and his Mystical Body. The Divine origin of the different senses of Scripture—and their contents—is thereby maintained within Catholic theology.

for being is to signify, while the spiritual sense uses signs that also have their own historical integrity and proper functions as things.”

74 Mayeski, “Quaestio Disputata,” 150.

75 See Levering, *Participatory Biblical Exegesis*, 17–35.

76 See Valkenberg, *Words of the Living God*, 211–27; Farkasfalvy, *Inspiration & Interpretation*, 145–48; *ibid.*, 150–52.

THE ORDER BETWEEN THE LITERAL AND ALLEGORICAL SENSES

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