

**Two Notions of the Infinite in Thomas Aquinas's
*Summa Theologiae I, Questions 2 and 46***

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ABSTRACT: Interpreters often take Aquinas' phrase "and this cannot go on to infinity" (found three times in his famous "Five Ways") as referring to what is now known as the Kalam Cosmological argument which argues that the past cannot be temporally infinite. I argue that this is a wrong interpretation of the argument Aquinas actually makes and that the difference between his version and the Kalam version plays off two different notions of the infinite.

Introduction

Near the beginning of his *Summa Theologiae*, the thirteenth century Dominican friar, Thomas Aquinas, claims that "the existence of God can be proved in five ways."¹ These arguments are regularly referred to as his *Five Ways* and are for many perhaps the most familiar reading from Thomas, if not the only reading they have done from his voluminous works. Of particular interest for my purposes are the first three of these *Five Ways*, in which Thomas denies the possibility of going "on to infinity." My concern in this paper is the nature of this infinite in the *Five Ways* of Question 2 which Thomas disallows and how this infinite contrasts with the infinite in Question 46 which he seemingly allows.

In the first three of the *Five Ways* Thomas denies the possibility of going "on to infinity." This claim is often the first point of the argument that is attacked by critics. Critics claim that it is not obvious why such an infinite regress is impossible. Others claim that it is

¹Thomas Aquinas, *Summa Theologiae* I, 2, 3. All English translations are from *Summa Theologiae of St. Thomas Aquinas*, translated by Father of the English Dominican Province (Westminster, MD: Christian Classics, 1981). Thomas acknowledges that certain of these arguments are not completely original with him. They are found for example in Aristotle's *Physics* VII, 1 241^b24 and *Metaphysics* XII, 7 1072^b23. Though the *Five Ways* are Thomas' most famous arguments for God's existence certain ones of them are expounded with greater detail in other of his works, including his *Summa Contra Gentiles* I, 13.

indeed possible to go "on to infinity" in a relevant sense. If such a regress is possible, then Thomas' conclusion that there must be a first cause does not follow.²

I have discovered a number of philosophy texts that take Thomas' claim in the *Five Ways* that "this cannot go on to infinity" as an argument for the impossibility of an infinite regress in the way that the *Kalam* cosmological argument argues for the impossibility of an infinite regress. I am going to argue that they are taking Thomas incorrectly here in Question 2 by showing that Thomas directly address this type of infinite regress later in the *Summa*, that the infinite regress here in Question 2 is a different type of infinite, that Thomas is undecided about the possibility of the *Kalam* cosmological argument type of infinite regress, and that the infinite regress Thomas denies in Question 2 is indeed impossible and that his argument carries.

The *Kalam* Cosmological Argument Type of Infinite Regress

The *Kalam* cosmological argument was championed by certain medieval Islamic and Christian philosophers. It has experienced a renaissance within the last twenty or so years largely due to the work of William Lane Craig.³ Craig makes two arguments regarding the

² To appreciate particular references to parts of his arguments, the reader should be aware of Thomas' style of argumentation in his *Summa Theologiae*. Thomas' *Summa Theologiae* is comprised of a series of numbered questions dealing with what he considers the basics of theology. For each question, Thomas deals with a number of objections to his own view to which he offers replies and then lays out his reasons for his own position. The structure is in this manner. Thomas states the question and lists the issues relevant to the explanation of the question. He calls these issues 'articles.' The articles themselves are numbered, first, second, third, etc. Having stated the question and having listed the articles, Thomas then begins an analysis of each article by unpacking a number of objections either affirming or denying the article. Next, he quotes an authority which he introduces with the phrase "On the contrary," which is to say, the contrary to the objections. This is followed by Thomas' arguments for his own view regarding the article which he introduces with the phrase "I answer that." After he completes his arguments, he then replies to each objection that he has previously set forth. With these steps taken, Thomas then proceeds to the next article and repeats the process until the question is exhausted, after which he then goes on to the next question, and so on throughout the whole *Summa*.

³ See, William Lane Craig, *The Kalam Cosmological Argument* (London: The Macmillan Press, LTD, 1979). The argument that flourished in Medieval philosophy and has been revived in contemporary thought largely by the works of Craig. He credits three main sources for the argument in the Middle Ages: al-Kindi [Ya'qub ibn Ishaq al-Kindi], *Al-Kindi's Metaphysics: A Translation of Ya'qub ibn Ishaq al-Kindi's Treatise 'On First Philosophy'*, with an Introduction and Commentary by Alfred L. Ivry (Albany, N.Y.: State University of New

impossibility of this infinite regress. One argument tries to show that it is impossible to traverse an actual infinite series. A second argument tries to show that it is impossible for an actual infinite to exist. Since, according to this argument, a beginningless temporal past of the universe would require both the traversing of an actual infinite of time and the existence of an actual infinite of time, it is impossible for the universe to be temporally beginningless, and thus it must have had a beginning. A beginning implies a beginner.

It is particularly the first of these two arguments (that it is impossible to traverse an actual infinite) that certain critics allege Thomas is making in the first three of his *Five Ways*. These philosophy texts take Thomas to be arguing that the impossibility of an infinite series of motions, efficient causes, or contingent beings (in the *Kalam* sense of infinite) implies a first mover, first efficient cause, and first necessary being.

Several examples will show this common way that philosophy texts take Thomas here. Manuel Velasquez, in his introductory text *Philosophy: A Text with Readings* says regarding Thomas' second way, "Philosophers have raised two key objections to this cosmological argument. The first concerns its contention that there can be no infinite regress in the causal sequences of the universe. But why not? Isn't it possible that the universe *has simply existed*

York Press, 1974)]; Al-Ghazali, *Tahafut al-Falasifah [Incoherence of the Philosophers]*, trans. Sabih Ahmad Kamali (Lahore: Pakistan Philosophical Congress, 1958), and Saadia Ben Joseph, *The Book of Beliefs and Opinions*, trans. Samuel Rosenblatt (New Haven, Conn.: Yale University Press, 1948). To the list one can add Bonaventure and John Philoponus. For Bonaventure's argument in his commentary on the second book of the *Sentences of Peter Lombard*, see *On the Eternity of the World: St. Thomas Aquinas, Siger of Brabant, St. Bonaventure*, trans. by Cyril Vollert, Lottie H. Kendzierski, and Paul M. Byrne (Milwaukee: Marquette University Press, 1964). For a discussion of Bonaventure's arguments see Etienne Gilson, *The Philosophy of St. Bonaventure*, trans. by Dom Illtyd Trethowan and Frank J. Sheed (Paterson, NJ: St. Anthony Guild Press, 1965), 172-176; and Frederick Copleston, *A History of Philosophy*, 9 Vols. (New York: Image Books, 1985), Vol. 2., 263-265. For John Philoponus see, Richard Sorabji, "Infinity and the Creation" in Richard Sorabji, ed., *Philoponus and the Rejections of Aristotelian Science* (London: Gerald Duckworth, 1987), 164-178 and also Richard Sorabji, *Time, Creation and the Continuum: Theories in Antiquity and the Early Middle Ages* (Ithaca, NY: Cornell University Press, 1983), 214-224. For an analysis of the argument see Richard G. Howe, *An Analysis of William Lane Craig's Kalam Cosmological Argument* (unpublished Master's Thesis, University of Mississippi, 1990).

forever and that things in it have simply been moving forever?"⁴ W. T. Jones, in his *A History of Western Philosophy: The Medieval Mind* muses, "The question, however, is whether such an infinite series of motions (or causes) is conceivable. Thomas, of course, denied that it is. In reply, the series of positive integers—1, 2, 3, 4, 5, and so on—could be cited. It is clear that this series does not have a last term ... Similarly, it could be said that before any time t , however remote in the past, there was an earlier time $t - 1$, in which motion was occurring. If there is no greatest positive integer, why need there be any first motion?"⁵

Douglas E. Krueger, in his *What Is Atheism? A Short Introduction* asserts, "In order to establish the conclusion of the argument (if the argument were valid), the theist would have to support the premise which asserts that the chain cannot go back infinitely far. Philosophers such as Aquinas have simply assumed that everyone would agree that such a regress is impossible."⁶

Further, Colin Brown, in his *Philosophy and the Christian Faith* says, "Aquinas believed that one could *argue back* from the things that we observe in the world to a prime mover, a first cause or a great designer behind it. In each case the drift of the argument follows the same basic pattern. Every event must have a cause. Nothing causes (or, for that matter,

⁴ Manuel Velasquez, *Philosophy: A Text with Readings*, 8 ed. (Belmont, CA: Wadsworth, 2002), 286, emphasis added. The second objection Velasquez discusses is that the conclusion of the argument is supposedly contradicted by a premise. Somewhere these "philosophers" that Velasquez appeals to have gotten the notion that there is a premise in Thomas' argument to the effect that "everything must have a cause;" a premise which is not in Thomas' argument and which he never defends.

⁵ W. T. Jones, *A History of Western Philosophy: The Medieval Mind* (Fort Worth: Harcourt Brace Jovanovich College Publishers, 1969), 219.

⁶ Douglas E. Krueger, *What is Atheism? A Short Introduction* (Amherst, NY: Prometheus Books, 1998), 149.

moves or designs) itself. *If we press far enough back*, we must acknowledge some first cause, prime mover or great designer of all things."⁷

Louis P. Pojman, in his *Philosophy: The Pursuit of Wisdom*, when he discusses Thomas' "Second Way" and the possibility of an infinite series of causes, introduces a discussion of William Lane Craig's treatment of the *Kalam* cosmological argument.⁸

David Berlinski, while not being short on criticisms for his fellow agnostics in their dismissal of Thomas' argument, nevertheless takes Aquinas's cosmological argument to be a *Kalam* type. He says

There is nonetheless a striking point at which Bib Bang cosmology and traditional *Theologiae* claims intersect. The universe has *not* proceeded from the everlasting to the everlasting. The cosmological beginning may be obscure, but the universe is finite in time. This is something that until the twentieth century was not known. When it became known, it astonished the community of physicists—and everyone else. If nothing else, the facts of Big Bang cosmology indicate that that one objection to the argument that Thomas Aquinas offered is empirically unfounded: Causes in nature do come to an end.⁹

Last, from a more famous if not more substantial philosopher, Bertrand Russell summarizes the *Second Way* in his *A History of Western Philosophy* as depending "upon the impossibility of an infinite regress"¹⁰ and summarizes it in his famous treatise on religion as

⁷ Colin Brown, *Philosophy and the Christian Faith* (Downers Grove, IL: InterVarsity Press, 1968), 26-27, emphasis added.

⁸ Louis P. Pojman, *Philosophy: The Pursuit of Wisdom* (Belmont, CA: Wadsworth/Thomson, 2004), 70-72.

⁹ David Berlinski, *The Devil's Delusion: Atheism and Its Scientific Pretensions*. New York: Crown Forum, 2008, p. 80.

¹⁰ Bertrand Russell, *A History of Western Philosophy* (New York: Simon and Schuster, 1972), 455.

saying that "as you go back in the chain of causes further and further you must come to a First Cause, and to that First Cause you give the name of God."¹¹

Is Thomas Making a *Kalam* Cosmological Argument in Question 2?

It is my contention that these examples illustrate a fundamental misunderstanding of Thomas' use of the notion of the infinite in Question 2 and that Thomas is not making a *Kalam* cosmological argument here.¹² As a *prima facie* argument for my contention, I should like to appeal to Thomas' comments very shortly on in the *Summa Theologiae* in Question 46. Here Thomas denies that the beginning of the world can be proven by an infinite regress argument. Objection 6 argues, "Further, if the world always was, the consequence is that infinite days preceded this present day. But it is impossible to pass through an infinite medium. Therefore, we should never have arrived at this present day; which is manifestly false."¹³

¹¹ Bertrand Russell, *Why I Am Not a Christian: And Other Essays on Religion and Related Subjects* (New York: Simon and Schuster, 1957), 6-7.

¹² It should be noted that a number of writers, both theists and atheists, acknowledge that Thomas is not making a *Kalam* cosmological argument in the *Five Ways* (even if they do not concur with the distinction I will be advocating here between Questions 2 and 46), including Ed. L. Miller, *Questions the Matter: An Invitation to Philosophy*, 5th ed., (New York: McGraw-Hill, 2004), 275-276; Samuel Enoch Stumpf and James Fieser, *Socrates to Sartre and Beyond: A History of Philosophy* 7th ed. (New York: McGraw-Hill, 2003), 169-170; Richard Swinburne, *The Existence of God* (Oxford: Clarendon Press, 1979), 87-88; William Lane Craig, *The Cosmological Argument from Plato to Leibniz* (London: The MacMillan Press, 1980), 174; Antony Kenny, *The Five Ways: St. Thomas Aquinas' Proofs of God's Existence* (New York: Schocken Books, 1969), 12-13; Robert Leet Patterson, *The Conception of God in the Philosophy of Aquinas* (London: George Allen and Unwin, 1933), 63; Antony Flew, *God: A Critical Enquiry* (LaSalle, IL: Open Court Publishing, 1984), 79; Katherin A. Rogers, "Philosophy of Religion" in *Reflections on Philosophy: Introductory Essays*, Leemon McHenry and Takashi Yagisawa, eds. (New York: Longman, 2003), 192-193; Michael Martin, *Atheism: A Philosophical Justification* (Philadelphia: Temple University Press, 1990), 98; George H. Smith, *Atheism: The Case Against God* (Buffalo: Prometheus Books, 1989), 242-244. Not surprisingly, I have not found any Thomists who interpret Thomas to be making a *Kalam* cosmological argument in the *Five Ways*.

¹³ *Summa Theologiae* I, 46, 2, 6. Praeterea, si mundus semper fuit, infiniti dies praecesserunt diem istum. sed infinita non est pertransire. Ergo nunquam fuisset perventum ad hunc diem: quod est manifeste falsum.

Without even looking yet at Thomas' reply to this objection, the very fact that Thomas sets this point up as an objection tells us that he is not making a *Kalam* cosmological argument. Thus, unless one is willing to accuse Thomas of a conflict within a very short space in the *Summa Theologiae*, a charitable reading requires us to consider the possibility that Thomas is using the notion of infinite in different ways in Questions 2 and 46.

While I have found no writer who explicitly accuses Thomas of a contradiction between these questions, I submit that the interpretations cited above would constitute a conflict with how Thomas argues in Question 46.¹⁴

In order to give a fuller response to the objection and defend my contention that Thomas is not making a *Kalam* cosmological argument here in Question 2, I will briefly expound Thomas' argument in these two questions vis-à-vis the infinite regress and propose what I believe is the distinction between the infinite regresses in Question 2 and the infinite regresses in Question 46 taking them in reverse order.

Exposition of Question 46, Second Article

Question 46, the third in a series, is titled "On the Beginning of the Duration of Creatures." The first question in the series (Question 44) deals with God as the first cause of things, the second question (Question 45) deals with the mode of emanation of creatures from

¹⁴ It should be noted that John Hick, while perhaps still interpreting the infinite regress of the *Five Ways* as a *Kalam* cosmological argument, seems to acknowledge a tension between Question 2 and Question 46, though he does not accuse Thomas of a contradiction. Hick comments: "The weakness of the [Second Way] argument as Aquinas states it lies in the difficulty (which he himself elsewhere acknowledges [in Question 46, article 2]) of excluding as impossible an endless regress of events requiring no beginning." (*Philosophy of Religion: Foundation of Philosophy Series* (Englewood Cliffs, NJ: Prentice-Hall), 21.

God. These three questions taken together comprise one third of Thomas' treatment of things pertaining to the production of creatures by God, i.e., creation.¹⁵

Question 46 contains three articles concerning whether creatures have always existed, whether their beginning to exist is an article of faith and whether the creation of things was in the beginning of time. It is the Second Article (titled "Whether It Is an Article of Faith that the World Began?") that is relevant to the issue of the infinite regress. In his responses to two objections, Thomas deals with the notions of infinite regress arguments for the beginning of the universe.

Thomas' Answer to Question 46, Second Article: "Whether It Is an Article of Faith that the World Began?"

Thomas answers the Second Article in the affirmative. Interestingly, having responded to arguments in the first article that the universe must be eternal, Thomas does not go on to argue what perhaps one might expect, viz., that the beginning of the universe can be philosophically demonstrated. Rather, it is his conclusion that philosophy is not able to make a determination either way.¹⁶ As a Christian, Thomas maintains that the beginning of the

¹⁵ The other two thirds deal with the distinction of creatures (Questions 47-102) and the preservation and government of creatures (Questions 103-119). This entire unit on the things pertaining to the production of creatures in turn is one third of Thomas' treatment of God. The other two thirds deal with things that pertain to the divine essence (Questions 2-26) and things that pertain to the distinction of persons, i.e., the Trinity (Questions 27-43). This entire unit on God in turn is one half of the part of the *Summa* which deals with the notion of Sacred Doctrine, God being its proper subject. The other half deals with the notion of Sacred Doctrine in general as to its proper subject and manner of inquiry. This entire unit together is referred to as Part I of the *Summa Theologiae*. Together with Parts II and III, it makes up the entire *Summa Theologiae*.

¹⁶ In trying to show that philosophy cannot make a determination either way, Thomas seeks to refute both the philosophical arguments that seek to demonstrate that the world is eternal (which he does in Article One) and philosophical arguments that seek to demonstrate that the world had a beginning (which he does in Article Two). One might be surprised that Thomas would try to refute philosophical arguments, the conclusions of which he is in full agreement (i.e., the arguments that seek to demonstrate that the world had a beginning). The reason he does this is because he is concerned that specious arguments might be advanced to try to demonstrate that the world had a beginning and "give occasion to unbelievers to laugh, thinking that on such grounds we believe things

universe is known only because it has been revealed by God (Special Revelation) that it had a beginning. For Thomas, being given by God in Special Revelation means that this truth is an article of faith, which is to say, one must trust God about the truth of the matter since reason cannot judge.

Thomas' Reply to Question 46, Second Article, Objection 1

While Objection 1 does not deal explicitly with the matter of infinite regress, it is still relevant for my purpose. We can see in his response to the objection that for Thomas the issue of a thing having an efficient cause is unrelated to whether the thing at some point did not exist. This first objection to the Second Article says, "It would seem that it is not an article of faith, but a demonstrable conclusion that the world began. For everything that is made has a beginning of its duration. But it can be proved demonstratively that God is the effective cause of the world; indeed this is asserted by the more approved philosophers. Therefore it can be demonstratively proved that the world began."¹⁷

The objection argues that the beginning of the duration of the world can be demonstrated (and therefore is not an article of faith) since it is the case that everything that is made has a beginning. Since it can be shown that the world has an efficient cause, *viz.*, God, as Thomas himself has already done in Question 44, then it follows that at some point the world did not exist and therefore must have had a beginning. Thomas then seeks to refute this objection.

that are of faith." (*Summa Theologiae* I, 46, 2. ... quae praebeant materiam irridendi infidelibus, existimantibus nos propter huiusmodi rationes credere quae fidei sunt.)

¹⁷ *Summa Theologiae* I, 46, 2, 1. Videtur quod mundum incoepisse non sit articulus fidei, sed conclusio demonstrabilis. omne enim factum habet principium suae durationis. sed demonstrative probari potest quod Deus sit causa effectiva mundi: et hoc etiam probabiliores philosophi posuerunt. ergo demonstrative probari potest quod mundus incoeperit.

Surprisingly, Thomas denies the notion that if something is created it must therefore have not existed at some point. For him, the fact that God created the world does not entail that necessarily at some point the world did not exist. The notion that God created the world is a claim about a certain ontological relationship that exists between God and creatures, viz., that the act of existing in creatures is continually caused by God. But it could logically be the case that God was eternally causing the act of existing in creatures. Though a foot is "prior" to the footprint it leaves in the dust, this notion of prior need not mean prior in time. An eternal foot eternally in the dust will have left an eternal footprint.

Thomas' response to Objection 1 allows for his further arguments that philosophy cannot adjudicate the issue of whether the universe has always existed since it allows him to philosophically maintain that God is the Creator of the world while maintaining that it is not philosophically necessary to admit a beginning of the duration of the world. He has deflected in this answer any contention that a commitment to God being the cause of the universe necessarily entails that the universe had a beginning of duration. In his answer to two further objections, viz., Objection 6 and Objection 7, Thomas takes on more directly the infinite regress arguments that interest me here.

Thomas' Reply to Question 46, Second Article, Objections 6 and 7

Objection 6 and Objection 7 employ a more direct line of argument involving the infinite. To repeat, Objection 6 states, "Further, if the world always was, the consequence is that infinite days preceded this present day. But it is impossible to pass through an infinite

medium. Therefore we should never have arrived at this present day; which is manifestly false."¹⁸

It should be clear that, though Objection 6 employs an argument based on the impossibility of traversing an infinite, Thomas' response to the objections does not so much repudiate the heart of the objection as much as it denies a fundamental assumption of the objection. He says, "Passage is always understood as being from term to term. Whatever bygone day we choose, from it to the present day there is a finite number of days which can be passed through. The objection is founded on the idea that, given two extremes, there is an infinite number of mean terms."¹⁹

Thus, here Thomas does not claim that the infinite can be traversed (which would amount to conceding the *Kalam* cosmological argument). Rather he denies that a beginningless past would constitute an infinite. But since it is of the essence of the *Kalam* cosmological argument that a beginningless past constitutes an actual infinite then he cannot be making a *Kalam* cosmological argument in Question 2 (unless we want to accuse him of being grossly inconsistent).

Rather than leveling such a charge against him, there is a more charitable way to interpret Thomas here. I shall argue that there is a way that one can render the two arguments consistent. That is, Thomas can be explicitly understood to be consistently arguing that the

¹⁸ *Summa Theologiae* I, 46, 2, 6. Praeterea, si mundus semper fuit, infiniti dies praecesserunt diem istum. sed infinita non est pertransire. ergo nunquam fuisset perventum ad hunc diem: quod est manifeste falsum.

¹⁹ *Summa Theologiae* I, 46, 2, ad. 6. Transitus semper intelligitur a termino in terminum. Quaecumque autem praeterita dies signetur, ab illa usque ad istam sunt finiti dies, qui pertransiri poterunt. obiectio autem procedit ac si, positis extremis, sint media infinita.

infinite regress in Question 2 is impossible and at the same time that the infinite in Question 46 is possible (or at least that the arguments against its possibility are unsuccessful).

Objection 7 and Thomas' response to it makes it even more clear that he does not concede a *Kalam* cosmological argument. It states, "Further, if the world was eternal, generation also was eternal. Therefore one man was begotten of another in an infinite series. But the father is the efficient cause of the son (Phys. ii., text. 29). Therefore in efficient causes there could be an infinite series, which is disproved (Metaph. ii., text, 5)."²⁰

The objection argues that an eternal world would entail the possibility of an infinite series of efficient causes. But since it has already been disproved that an infinite series of efficient causes is possible then philosophy has demonstrated that the world cannot be eternal. Interestingly, the disproof cited is not Thomas' own argument given earlier in the *Summa* in Question 2, but rather is Aristotle's disproof given in the *Metaphysics*.²¹

In his response to this objection Thomas will allow an infinite series of efficient causes of one type while denying the possibility of an infinite series of efficient cause of another type. Further on, I will try to show the distinction Thomas maintains between these two types of infinite series. In the mean time, let me first get before us some comments about Question 2.

Exposition of Question 2, Third Article, a.k.a., the *Five Ways*

Question 2 of Thomas' *Summa* is concerned with the existence of God. It is composed of three articles dealing with whether the existence of God is self-evident (to which Thomas

²⁰ *Summa Theologiae* I, 46, 2, 7. Praeterea, si mundus fuit aeternus, et generatio fuit ab aeterno. Ergo unus homo genitus est ab alio in infinitum. Sed pater est causa efficiens filii, ut dicitur in II Physic. Ergo in causis efficientibus est procedere in infinitum: quod improbat in II Metaphys.

²¹ *Metaphysics* II, 2, 994^a1-11.

answers 'no') whether the existence of God can be demonstrated (to which Thomas answers 'yes') and whether God exists (to which Thomas answers with his famous *Five Ways*).

The First Way argues from motion in the world to a first unmoved mover. The Second Way argues from the order of efficient causes in the world to a first efficient cause. The Third Way argues from the contingency of things in the world, i.e., the possibility of things to be or not to be, to a first necessary being. The Fourth Way argues from the gradation of goodness, truth, and nobility among things in the world to an ultimately good, true, and noble being. The Fifth Way argues from the governance of the world, i.e., that things without intelligence nevertheless act toward some end, to a being that is the final cause or goal or end to which and by which these things are directed. He concludes that this first unmoved mover, this first efficient cause, this first necessary being, this ultimately good, true and noble being, and this final cause or goal or end to which and by which things are directed are God. Of particular interest for my purposes is what Thomas has to say about infinite regresses in the first three of the *Five Ways*.

In the *First Way* he says, "If that by which it is put in motion be itself put in motion, then this also must needs be put in motion by another, and that by another again. *But this cannot go on to infinity*, because then there would be no first mover ..."22

In the *Second Way* he says, "Now in efficient causes, *it is not possible to go on to infinity*, because in all efficient causes following in order, the first is the cause of the intermediate cause."23 In the *Third way* he says, "But every necessary thing either has its

22 *Summa Theologiae* I, 3, emphasis added. Si ergo id a quo movetur, moveatur, oportet et ipsum ab alio moveri; et illud ab alio. hic autem non est procedere in infinitum: quia sic non esset aliquod primum movens.

23 *Summa Theologiae* I, 3, emphasis added. Non autem est possibile quod in causis efficientibus procedatur in infinitum. quia in omnibus causis efficientibus ordinatis, primum est causa medii ...

necessity caused by another, or not. Now *it is impossible to go on to infinity* in necessary things which have their necessity caused by another, as has been already proved in regard to efficient causes."²⁴

As an ancillary observation, it strikes me that perhaps all of us have been reading Thomas wrong in how the infinite plays into his arguments here. It is commonly thought that Thomas is using the impossibility of an infinite regress as a proof of the necessity of the first mover, cause, or necessary being. But it seems that perhaps Thomas is actually making the converse argument. It seems that he is not saying "Since there cannot be an infinite regress, therefore there must be a first mover (or cause or necessary being)." Rather he is saying "Since there must be a first mover (or cause or necessary being), therefore there cannot be an infinite regress." To state these as truth-functional syllogisms, the common reading of Thomas here says (1) $\sim IR \supset F$; (2) $\sim IR \therefore F$. But I am suggesting that Thomas is saying something more akin to (1) $IR \supset \sim F$; (2) $F \therefore \sim IR$. Perhaps the most obvious objection to this reading would be that Thomas cannot be using the notion of a first mover (or cause or necessary being) as part of the argument for the first mover (or cause or necessary being) since this would be a circular argument. However, one need not take the argument exactly as such. Instead, he is saying that if anything is moved (or caused to exist or has contingent being) then there would have to be a first (i.e., ontologically first) in the series otherwise the current thing would not be moved (or caused to exist or be a contingent being).

Regardless whether Thomas is arguing that the impossibility of an infinite regress necessitates a first cause or whether he is arguing that the necessity of a first cause precludes an

²⁴ *Summa Theologiae* I, 3, emphasis added. Omne autem necessarium, vel habet causam suae necessitatis aliunde, vel non habet. non est autem possibile quod procedatur in infinitum in necessariis, quae habent causam suae necessitatis sicut nec in causis efficientibus.

infinite regress, he clearly maintains that this infinite regress is impossible. If we take the former as Thomas' argument, then it is conspicuous by its absence why such an infinite regress is impossible. Indeed, this constitutes a common objection to his argument as my earlier citations show. If, however, my interpretation is correct that the latter is Thomas' argument (that a first cause precludes an infinite regress) then such an objection is irrelevant since it misses what exactly it is that Thomas is trying to demonstrate.

Arguments that the Infinities of Question 2 Are Different from the Infinities of Question 46

Several points might be made in support that the notions of the infinities are different between Question 2 and Question 46 before I suggest exactly what the difference is. First, in Question 46 Thomas explicitly claims that it is an article of faith that "God is the creator the world: hence that the world began."²⁵ Yet, again explicitly, Thomas claims in Question 2 that the existence of God is not merely an article of faith (though some might take the existence of God on faith) and marshals philosophical arguments to demonstrate the existence of God. Thus, if on the one hand he is dealing with something that is fundamentally an article of faith and yet on the other hand he is dealing with something that is philosophically demonstrable, there must be something fundamentally different between the two questions. The fact that the existence of the world necessitates the existence of God as its cause is a different question than the beginning of the duration of the world. One can be known by philosophy but the other only by faith.

This should suggest that arguments employed within each, though they might seem to be the same, are in fact different. The rejected infinity that is utilized by Thomas in a

²⁵ *Summa Theologiae* I, 46, 2. ... Deum esse Creatorem mundi, sic quod mundus incoeperit esse...

philosophical argument for the existence of God must be different from the allowable infinite that is utilized by others to demonstrate what Thomas thinks cannot be demonstrated.

Second, one should note regarding Thomas' response to Objection 7 of the Second Article of Question 46 that here he explicitly repudiates the type of infinite regress argument that characterizes the *Kalam* cosmological argument. In his reply to Objection 7 Thomas denies that the infinite series employed in the illustration is impossible, viz., the case of one man begotten of another man in an infinite series.

This gets us to the heart of the matter. Thomas explicitly rejects an infinite series of efficient causes in Question 2 but explicitly allows an infinite series of efficient causes in Question 46. Thus, taken at face value, Thomas' comments regarding the infinite regress in Objection 7 stand in stark contrast to the interpretations that some philosophers give of his comments of the infinite regress in his *Five Ways*. This is so because these interpretations have Thomas denying the possibility of an infinite regress.

As I stated earlier, unless one is willing to accuse Thomas of a contradiction between these two questions, then it must be the case that Thomas means different things regarding the infinite regress he allows in Question 46 and the infinite regress he rejects in Question 2.

The Difference Between the Two Infinities: Infinity *Per Se* vs. *Per Accidens* Infinity

It is now time to try to draw the differences out more explicitly between the infinite in Question 2 and the infinite in Question 46. It should be clear that the notion of the infinite in Question 46 is the one that most readily comes to mind in such discussions and, as I have argued, is the notion of the infinite that some philosophers mistakenly think obtains in Question 2. It is the infinite of the *Kalam* cosmological argument. It is an infinite that Thomas thinks

philosophy is incapable of demonstrating either its necessity or its impossibility. But the infinite of Question 2 is an infinite of which Thomas explicitly denies the possibility.

A further look at Thomas' reply to Objection 7 of Questions 46 will give us his explanation of the difference. Remember that the objection employs an example of an infinite regress of efficient causes, *viz.*, one man begotten of another in an infinite series. Thomas allows for such an infinite even though the objection cites this as an example of an infinite efficient causal series. But how can he allow for this infinite series of efficient causes in Question 46 while denying an infinite series of efficient causes in Question 2? His answer lies in his distinction between proceeding to infinity *per se* in efficient causes and proceeding to infinity *accidentally* as regards efficient causes.

Thomas says, "In efficient causes it is impossible to proceed to infinity *per se*—thus, there cannot be an infinite number of causes that are *per se* required for a certain effect. ... But it is not impossible to proceed to infinity *accidentally* as regards efficient causes ..."26 One can begin to get at the difference between the infinite *per se* and a *per accidens* infinite by looking at Thomas' examples of each. For the infinite *per se*, he uses the same example as in Question 2, *viz.*, "that a stone be moved by a stick, the stick by the hand, and so on to infinity."27 For the *per accidens* infinite, he uses the example of the man having been begotten by a man back to infinity.

The specific difference seems to me to be this: In a *per accidens* infinite, the cause of an effect is only accidentally related to the effect being itself a cause whereas in an infinite *per se*

²⁶ *Summa Theologiae* I, 46, ad. 7. In causis efficientibus impossibile est procedere in infinitum per se; ut puta si causae quae per se requiruntur ad aliquem effectum, multiplicarentur in infinitum ... sed per accidens in infinitum procedere in causis agentibus non reputatur impossibile ...

²⁷ *Summa Theologiae* I, 46, ad. 7. Lapis moveretur a baculo, et baculus a manu, et hoc in infinitum

the cause of the effect is what causes the effect itself to be a cause. When the cause of *w* is the cause of *w*'s causing *x* and *x* is the cause of *y*'s causing *z*, then this series cannot be an infinite regress, otherwise, *z* would not be caused. However, when the cause of *w* is not the cause of *w*'s causing *x* and *x* is not the cause of *y*'s causing *z*, then this series can be infinite since the infinity of the series is only accidental to *z*'s being caused.

Consider again Thomas' illustration. He says, "It is accidental to this particular man as generator to be generated by another man; for he generates as a man, and not as the son of another man."²⁸ If a man causes his son to exist, and the son causes the grandson to exist, the man is not causally related to the son's being a cause of the grandson. In other words, it is not by virtue of the fact that the son is caused by the man that the son is the cause of the grandson. The man causing the son is accidental to the son being a cause of the grandson. Thus, for Thomas, there could be an infinite regress of such causes.

However, if a hand moves a stick and the stick moves a stone, it is precisely by virtue of the fact that the hand is moving the stick that the stick is able to move the stone. The hand causing the stick to move is also the cause of the stick itself being a cause of the stone to move. Thus in this instance, the series cannot be infinite otherwise there would be no "first" mover that accounts for the motion of the stone. The same reasoning applies to the existence of the world.

It should be pointed out that perhaps the term 'first' here is ambiguous. We should not suppose that the 'first' cause here is first in a distant temporal past. The possibility of a series of this type is expressly admitted by Thomas. The critical element is summarized by Etienne

²⁸ *Summa Theologiae* I, 46, ad. 7. Accidit huic homini, in quantum generat, quod sit generatus ab alio: generat enim in quantum homo, et non in quantum est filius alterius hominis

Gilson. "The proof in no way considers movement as a present reality the existence of which requires an efficient cause in the past, which is God. It aims simply at establishing that in the universe as actually given, movement, as actually given, would be unintelligible without a first Mover communicating it to all things. In other words the impossibility of an infinite regress must not be taken as an infinite regress in time, but as applying to the present consideration of the universe."²⁹ The same could be said of efficient causality of existence, *mutatis mutandis*. Since the causation here is simultaneous, an infinite series would preclude any sufficient cause of either the motion or existence.

Perhaps a more modern way to say this is that there cannot be an infinite regress of instrumental causes since there must be a "first" efficient cause. Take the motion of a freight train as an example. Though the motion of a given boxcar can be instrumentally explained by the motion of the preceding boxcar, an infinite series of moving boxcars is impossible since this would negate the existence of the engine which alone can account for the motion of the train. No boxcar *qua* boxcar can account for its own motion or the motion of any other boxcar. In like manner, no creature *qua* creature can account for its own motion or existence. Thus, for Thomas, the infinite that he disallows in Question 2 is the infinite *per se*. The infinite that he allows in Question 46 is a *per accidens* infinite.

Conclusion

Clearly there is much more to be said concerning the metaphysics of motion, efficient causality and necessary and contingent being. Thomas' argument as they occur in the *Summa Theologiae* presuppose a robust metaphysics, explicated in his earlier works such as *On Being*

²⁹ Gilson, *The Philosophy of St. Thomas Aquinas*, 3rd ed., trans. Edward Bullogh (New York: Dorset Press, n.d.), 76.

and Essence, Commentary on the Sentences of Peter Lombard, Summa Contra Gentiles, and De Aeternitate Mundi. My purpose here was not to unpack all these notions, but only to try to show that Thomas' understanding of the infinite in Question 2 is different than the infinite in Question 46 and that a common way that the infinite in Question 2 is interpreted is wrong. Further, arguments leveled against Thomas' arguments in Question 2 based upon this mistaken interpretation of the infinite in Question 2 are likewise irrelevant.