

# No Cause, No Credo

Aristotelian Realist Philosophy of Nature as Preambula Fidei

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**ABSTRACT:** This study presents St. Thomas Aquinas' groundbreaking treatment of the relation between God as Creator and nature through the Aristotelian model of natural causation and the distinction between *essentia* and *esse* contra occasionalist conceptions of creation. By clearly distinguishing primary (divine) and secondary (natural) orders of causation, the Angelic Doctor champions Divine omnipotence while preserving the causal integrity of nature at one and the same time. His position on the relation of divine and natural causation in nature is formulated, in part, as a response to the occasionalist doctrine, denying natural causation. While Thomas shows that denying natural causation would actually vitiate divine omnipotence, this study extends his argument showing Aristotelian causation (secondary cause) is a necessary condition—i.e., one of the *preambula fidei*—for the Christian belief that God is the all-powerful creator of the natural world. This presentation and extension of St. Thomas Aquinas' critique of occasionalism is needed given a continuing trend among Anglo-American Analytic and Humean Christian philosophers to deny natural causation and hold that God is the only cause.

## I. Introduction<sup>1</sup>

As Steve Baldner and William Carroll have pointed out in their *Aquinas on Creation*, Christian's have sought from Antiquity to give a philosophical and

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<sup>1</sup> The following study was first presented at the meeting of the Society for Thomistic Natural Philosophy in conjunction with the meeting of the American Catholic Philosophical Association, 23 November 2019. The paper was presented along with

theological account of the doctrine of creation, going beyond the hexaemeral *formation* account of *Genesis*.<sup>2</sup> Clear philosophical expressions of the doctrine of creation *ex nihilo* (Hippolytus of Rome, 170–235 A.D.) and conservation (St. Augustine, 354–430 A.D.) were needed to distinguish the Christian belief in God, the transcendent and omnipotent creator, from the beliefs of the pagans and philosophers, which often treated God as coeval with an eternal material universe and denied His constant providential action in nature as Creator.<sup>3</sup>

In the 13<sup>th</sup> Century, with the reception of the works of Aristotle in the Latin West that apparently demonstrated the eternity of the natural world, along with those of the Arabic commentators endorsing the view (especially Avicenna and Averroes), the need for clear philosophical expression of the doctrine of creation was once again pressing. As Baldner has shown, St. Albertus Magnus first clearly expressed creation as God’s act of giving existence to creatures *without a prior material cause*. Further, he showed that every creature, metaphysically speaking, is distinct from God as Simple as being a composition of factual but potential existence (*quod est*) and that *by which* it exists from God (*quo est/esse*).<sup>4</sup>

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Michael Tkacz’s “Thomas Aquinas, Prime Matter, and the Cosmogonical Fallacy,” and Steven Baldner’s “Theistic Creation and Natural Philosophy.” I would like to thank Professor Tkacz for originally presenting and showing me the importance of St. Thomas Aquinas’ Aristotelian approach to nature and creation, for inspiring this study in his Medieval Philosophy class at Gonzaga in 2007, and for gifting to me Baldner and Carrolls’ Aquinas *on Creation*, the commentary and text of which continue to open my mind to the Angelic Doctor’s most brilliant treatment of creation. I would like to further thank Professor Baldner for his charitable comments and dialogue.

<sup>2</sup> See, Baldner and Carroll 1997: *Aquinas on Creation*, especially 1–12 of their Introduction.

<sup>3</sup> As Baldner and Carroll have shown, Hippolytus of Rome clearly expressed the Christian doctrine of *creatio ex nihilo*, at i.212–236AD: *Refutatio omnium haeresium* 10.32, and St. Augustine clearly expressed the doctrine of the divine conservation of the world as an immediate consequence of the doctrine of creation *ex nihilo* at i.401–15AD: *De genesi ad litteram*, 4.12.22.

<sup>4</sup> Baldner, 2011: “Creation, Time, and Causality: Albertus Magnus and Thomas Aquinas”. See also Baldner 2014: “Albertus Magnus on Creation: Why Philosophy is Inadequate”. Albert uses the Boethian distinction between *quod est* and *quo est* at his *Summa theologiae* II. Professor Tkacz has shown, in his “Albertus Magnus, Cosmogony, and the Error Platonis: Comments on Professor Baldner’s Account of Some Thirteenth-Century Developments in the Philosophy of Creation,” that Albert was able to offer new clarity on

Excelling both his predecessors and great teacher Albert in the integration of faith and reason, St. Thomas Aquinas famously resolved the apparent contradiction between Aristotelian natural science and theology holding that the world is eternal and the Christian belief that God created the world with a beginning in time (*ab initio temporis*).<sup>5</sup> Thomas accomplished this task by recognizing that the key philosophical meaning of *creatio ex nihilo* does not reside in the claim that God created a first in time in the natural order, but rather it means the relation of the absolute dependence of creature on God as the immediate efficient cause of existence.<sup>6</sup> Fully retaining Aristotle’s conceptions of science, nature, and natural causation, then, Thomas showed that there is not a contradiction between the doctrine of creation *ex nihilo* and the philosophical assertion (most reasonable through natural reason alone) that the world is eternal. Indeed, Thomas himself attributed a doctrine of creation to Aristotle, in his commentaries on the *Sentences* and the *Physics*.<sup>7</sup> Moreover, while God could

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the doctrine of creation as a result of his correct understanding of Aristotelian form, and by identification of the “*error Platonis*.”

<sup>5</sup> Albert took the primary meaning of creation *ex nihilo* to be the negation of duration in time, which implies the temporal beginning of the world. He rejected the claim that creation could be known philosophically, leaving somewhat of a rift in the relation between faith and reason. For Albert, from the human perspective, creation is like a miracle knowable through faith and revelation alone. Albert held this position because, following Aristotle, he thought it true that material beings must have prior causes in time. Since creation means, precisely, that God created a first *without* a prior material cause in time, the doctrine cannot be known through philosophy, and, consequently, no philosophers have expressed it. St. Thomas departs from Albert on this point. See, Steve Baldner, “Creation, Time, and Causality,” 8–10. The key texts in Albert, as cited by Baldner, are i.1248–54: *Summa theologiae*, II, Tr. 1, Q. 3, M. 3, ad 5; c.1245: *Sententiae*, II, D. 1, A. 8, and i.1245–52: *Physica*, 8.1.13.

<sup>6</sup> See, Aquinas c.1252/56a: *In libros Sententiarum*, lib.2, d.1, q.1, a.2; in *Aquinas on Creation*, translated by Baldner and Carroll, 74–75.

<sup>7</sup> In c.1252/56a: *In libros Sententiarum*, lib.2, d.1, q.1, a.2, c., Thomas explains that the philosophers have demonstrated the doctrine of creation *ex nihilo*, where it is understood to mean (i) the causing of the existence of the created without prior material and (ii) the relation of dependence for existence that the creature has on God. On the other hand, Thomas notes that, taken in the sense (iii) that the creature has non-being prior to being in time—which is to say that creation has a first in time—it is clear that the doctrine is not demonstrable. Again, because natural, hylomorphic beings cannot be conceived without contradiction as not having prior natural/material causes of their being in time, it is impossible for us, through natural reason, to identify a first of nature/creation in time.

have chosen to create an eternal world, there is also not a contradiction in holding that, in fact, He created the world with a beginning in time.<sup>8</sup> In this manner, Thomas championed the integration of faith and reason in his treatment of creation, upholding the integrity of natural science (surpassing Albert)<sup>9</sup> and opening the way for rational belief (faith) in the traditional teaching of Christianity on creation.

Yet, St. Thomas' distinctive contribution to the perennial philosophy of creation extends further. While St. Augustine and Albert clearly held *both* the doctrine of conservation *and* that creatures are endowed with their own causal efficacy, they did not fully express the compatibility of the two doctrines.<sup>10</sup> How is it that God's creative act is to constantly cause created beings to be *and* that these beings are endowed with their own causal capacities? One of the most important ways in which Thomas innovatively perfected the philosophical expression of the Christian doctrine of creation was by drawing a distinction between the orders

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For Baldner and Carrolls' helpful discussion of the passages, see 1997: *Aquinas on Creation*, 41–44. Thomas further implies the doctrine for both Plato and Aristotle in 1272: *Substantiis separatis*, c.9, n.52.

<sup>8</sup> While God can create a natural being that is first in time, we could never know such a natural first *qua* beginning. This is to say, we could not know it as being a natural being without a prior natural cause in time. The reason for this is that such natural being will still present itself to us as materially potential, so that we will not be able to conceive of it in natural philosophy or science except as having a prior natural cause of its being. Thus, if we are to know that there is a first natural being created in time, it is necessary that God reveal such a fact to us, and we could not know it through natural reason. In this manner, the sound logic of Aristotle's demonstration for the eternity of the world is preserved *and* the belief that there is a first created in time is also shown to be compatible with this logic.

<sup>9</sup> Albert held that a legitimate philosophical denial of the Christian doctrine of *creatio ex nihilo* could be made by claiming that the doctrine is impossible, violating the principle of *ex nihilo non nihil fit*. As cited and treated by Baldner 2011: "Creation, Time, and Causality," 9. See also i.1245–52: *Physica* 8.1.13.

<sup>10</sup> Admittedly, this claim requires further research and evidence in the case of St. Albert. However, it seems to this author, especially given Professor Baldner's research, that this compatibility really cannot be fully expressed without St. Thomas' robust distinction between *essentia* and *esse*. That all creatures are a composition of *quod est et quo est* does aid us in understanding God's creative act as the cause of the existence of creatures. However, it does little by way of explaining how it is that creatures are causes in nature at the same time that God is the cause of creatures and their effects.

of primary (divine) and secondary (natural) causation, and showing that both orders are operative in natural agency. As this study will show, Thomas was able to uphold the distinction between primary and secondary cause by synthesizing the Aristotelian account of *natural* causation—i.e., hylomorphism and the four causes<sup>11</sup>—with the distinction between essence (*essentia*) and existence (*esse*).<sup>12</sup> As the unqualified cause of the existence of created beings at all times, God is also the primary cause of all forms of natural agency. At the same time, through the forms they possess and which God causes *to be*, natural/created beings are real agent, formal, material, and final causes in the natural order. In fact, then, without his Aristotelian natural philosophy and science, the Angelic Doctor could not have made this innovative development in the philosophy of creation. The key texts displaying the distinction between the orders of primary and secondary cause are *Summa Contra Gentiles* III, 65–70, and *Summa Theologiae* I, q. 105, a. 5. Aside from his desire to give a more refined account of God’s providential governance of creation, Thomas was motivated to this development by at least two erroneous accounts of creation: occasionalism and deism. The former position holds that God is the only cause, denying secondary/natural causes altogether, while the latter limits God’s creative act to the initial creation of the world in time.

The present study seeks to extend St. Thomas’ work on the philosophical expression of the doctrine of creation, focusing on his argument against the occasionalist denial of secondary or natural causation. Thomas’ critique, which is aimed at the approach of the medieval Islamic theologian, Al-Ghazali, shows that the denial of secondary cause actually vitiates divine omnipotence. This is a devastating critique, as one of Al-Ghazali’s primary motivations for positing occasionalism is to champion divine omnipotence. Presenting Thomas’ conception of the orders of primary and secondary causation, along with his critique of occasionalism, this study will extend the argument of the Angelic Doctor by showing an Aristotelian conception of natural causation and the order of secondary causes is a necessary condition—i.e., one of the *preambula fidei*—for the Christian belief that God is the all-powerful creator of the natural world. Without natural, secondary causes, it is not possible to intellectually assent to the first line of the creed: *Credo in Deum Patrem omnipotentem, Creatorem caeli*

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<sup>11</sup> Cf. Aquinas c.1252/56b: *De principiis naturae* and 1268–69: *In libros Physicorum*.

<sup>12</sup> The distinction was first systematically thematized by Avicenna i.1020/27: *Metaphysics of the Healing*, especially l.6–8. In Thomas, see especially c.1252/56c: *De ente et essentia*, caput 4.

*et terrae*. Without secondary causes, the human intellect cannot form the judgement that created being exists separately from the Divine Being. Thus, the denial of secondary cause would logically entail a denial of the claim that God creates being separate from His own existence. Given a continuing and growing trend among Christian philosophers working outside the Aristotelian-Thomist and Catholic intellectual traditions to endorse and promote occasionalism,<sup>13</sup> there is now a pressing need to hear afresh St. Thomas' position on the compatibility of natural and divine causation and the necessity of natural causation for the doctrine of omnipotence, *and* to see why occasionalism is incompatible with the Christian and Theistic doctrine of creation as it is expressed in the *credo*.

## 2. Occasionalism: The Need for an Aristotelian-Thomistic Response

The 11<sup>th</sup> Century Asharite theologian, Al-Ghazali (1058–1111), championed occasionalism and his view became predominant in the Islamic religious experience.<sup>14</sup> In the Modern period, occasionalism was proposed by the Cartesians, Louis de la Forge (1632–66), Géraud de Cordemoy (1614–83), Arnold Geulincx (1624–69), and most famously by Nicholas Malebranche (1683–1715).<sup>15</sup> In the American Reformed Protestant tradition, occasionalism was championed by New England theologian, Jonathan Edwards (1703–1758).<sup>16</sup> And, as Kathrin

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<sup>13</sup> See immediately below, in Section II.

<sup>14</sup> As Ismail R. Al-Faruqi has pointed out, occasionalism remains an essential aspect of Islamic religious experience. See Al-Faruqi 1973: "The Essence of Religious Experience in Islam": 186–281.

<sup>15</sup> Whether Descartes himself was an occasionalist is a matter of some debate. For an excellent historical treatment of Louis de la Forge, Géraud de Cordemoy, and Arnold Geulincx, see Sukjae Lee 2008: "Occasionalism," *Stanford Encyclopedia of Philosophy*, <<https://plato.stanford.edu/archives/win2016/entries/occasionalism/>>.

On Malebranche, see Malebranche 1674–75: *Oeuvres complètes de Malebranche*, II, 312, and *The Search for Truth and Elucidations of the Search for Truth*, 448, as cited by Lee 2008: "Occasionalism." In the la Forge tradition, which includes contemporary philosophers Walter Schultz and Lisanne D'Andrea-Winslow (to be treated below), occasionalism was limited to the material universe, supposedly allowing for free human agency.

<sup>16</sup> See, Edwards 1758: *Original Sin*, and footnote 36 below. For a helpful presentation of Edward's view, see "Divine Compositionism as Occasionalism," 220–223.

Rogers has pointed out in her article, “What’s Wrong with Occasionalism?,” occasionalism has its contemporary proponents, including Hugh J. McCann and Jonathan L. Kvanvig, Walter Schultz and Lisanne D’Andrea-Winslow, and the most influential Alvin Plantinga.<sup>17</sup> In what immediately follows, let us treat of occasionalism in its medieval, modern, and contemporary forms, with the aim of meaningful discourse in the here and the now.

As noted above, the essence of occasionalism is the *theological* claim that God is the only cause *and* the claim extending into natural philosophy, consequently, that there are no natural causes, i.e., that created beings do not have causal powers. Not surprisingly, then, occasionalism’s theological claim is historically coupled with a philosophical critique and denial of natural causation. This, of course, is necessary as natural beings certainly *seem* to us to be causal agents with their own effects. Beginning with an *a priori* rejection of natural form as the explanative principle for the agency of natural beings,<sup>18</sup> occasionalists deny that we can know with any kind of necessity a temporally prior existent as the cause of a posterior existent. So, according to Al-Ghazali,<sup>19</sup> there is no necessary causal connection between a temporally prior existent or event in relation to a temporally posterior existent or event in nature.<sup>20</sup> Rather, analysis of change merely grants apprehension of the *habituated* coincidence—the *side-by-sidedness*—of two discrete events, or existents, not that the temporally prior is the agent cause responsible for the temporally posterior. Considering the

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<sup>17</sup> See Rogers, “What’s Wrong with Occasionalism?” 346–369; McCann and Kvanvig, “The Occasionalist Proselytizer: A Modified Catechism,”; Plantinga 2008: “What is Intervention’?” 380–381 and 392–393; Plantinga 2016: “Law, Cause, and Occasionalism”; and Schultz and D’Andrea-Winslow 2017: “Divine Compositionism as Occasionalism”. The contents of the latter article are mirrored by the same authors’ “Divine Compositionism: A Form of Occasionalism or a Preferable Alternative View of Divine Action?”. See also, Schultz, “Dispositions, Capacities, and Powers: A Christian Analysis”.

<sup>18</sup> Aristotle anticipated this Al-Ghazalian and Humean type approach, positing in c.353–47bc: *Physics* II.3 that agent causes are simultaneous with their effects, and making it clear that the source of power/potentiality in an agent for acting is the principle of form. On the latter point, see especially c.353–47bc: *Physics* II.7 on the convertibility of form, agent, and end.

<sup>19</sup> For a more detailed (and parallel) account of Al-Ghazali’s position, see chapter 2 of my M.A. Thesis 2010: *A Thomistic Critique of Occasionalism From Natural Causality, Divine Omnipotence, And the Psychology of Human Agency*, available in ProQuest.

<sup>20</sup> See Al-Ghazali c.1095: *The Incoherence of the Philosophers* II, d.17.1.

relationship between fire and the combustion of the cotton,<sup>21</sup> or a father and mother and the coming-to-be of the son,<sup>22</sup> we do not know the antecedents *per se* as causes of the effect, but only as regularly placed, temporally prior, discrete atomic existents.<sup>23</sup> The regular temporal sequence of events is not a result of created subjects possessing their own causal powers. As Al-Ghazali says, it “...is due to the prior decree of God, who creates them side-by-side, not to its being necessary in itself, [and] incapable of separation.”<sup>24</sup>

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<sup>21</sup> c.1095: *The Incoherence II*, d.17.5 (167).

<sup>22</sup> c.1095: *The Incoherence II*, d.17.5 (167).

<sup>23</sup> c.1095: *The Incoherence II*, d.17.5 (167): “Observation, shows the occurrence [of burning] at [the time of the contact with the fire] but does not show the occurrence [of burning] by [the fire] and that there is no other cause for it.” Again, referring to the father’s relation to his son and all his capacities, Al-Ghazali says, “It is known that these [come to] exist *with* [the placing of the sperm], but no one says that they [come to] exist *by* it.” To put this in precise Aristotelian terms, and similar to Hume’s first critique at sec. 4 of *An Enquiry Concerning Human Understanding*, Al-Ghazali is claiming that there is no middle term to connect cause and effect in the conclusion of a proper demonstration. Again, for Aristotle, in demonstrations regarding the agency of natural subjects, the form provides the middle term. For a more detailed argument along these lines, see chapter 2 of my dissertation 2018: *φύσις και τὸ ἀνθρώπινον ἀγαθόν: The Aristotelian Foundations of the Human Good*, available in ProQuest.

<sup>24</sup> c.1095: *The Incoherence II*, d.17.1 (166). Contra the reading given here, Frank Griffel has argued that Al-Ghazali is not necessarily committed to the occasionalist doctrine—that “secondary causality is acceptable for Al-Ghazali as long as it doesn’t imply that this particular world is a necessary creation of God.” See, 2018: “The Seventeenth Discussion of the Incoherence of the Philosophers,” in *Al-Ghazali’s Philosophical Theology*. However, given his reductionistic atomism, and the Asharite denial of nature in the Aristotelian sense (c.353–47bc: *Physics II*.1–3), what Al-Ghazali might mean by “cause” is certainly not what is meant by the term αἰτία (*aitia*) in the Aristotelian-Thomistic tradition as what is *responsible* for the existence of a natural being in terms of matter, form, agent, and end. As is clear in Griffel’s account, ‘cause’ might mean for Al-Ghazali what it meant for Hume: a temporally prior existent that is habitually followed by another existent (called an “effect”). On this model, the human mind does not discover the nature and form by which what is temporally prior is responsible for what is temporally posterior, but it can only hope to describe repeated sequences as “laws.” As will become apparent in this study’s extension of St. Thomas’ critique of occasionalism, the belief in God as the omnipotent creator of the world requires that we know nature as causal in the Aristotelian sense. Thus, limiting one’s occasionalism to an epistemological claim, without making the

In the post-nominalist, Cartesian school of thought to which Malebranche belonged, it had been taken for granted that there are no common natures or forms that are the source of the causal powers of natural beings on the traditional Aristotelian-Thomistic model. On that model, beginning with sense-perception, the human mind comes to possess universals, or what Aristotle referred to as second beings/substances signifying substantial form as the source of natural agency. If it is denied that the mind can come to possess such definitions of the forms of natural beings, then occasionalism seems a most reasonable position for the theist. In a reductively mechanistic material universe devoid of nature as form and end, the appeal to God as the only cause is most reasonable.<sup>25</sup> So Malebranche says, “there is only one true cause because there is only one true God; ...the nature or power of each thing is nothing but the will of God; ...all natural causes are not *true* causes but only *occasional* causes.”<sup>26</sup>

After the 18<sup>th</sup> Century, with the widespread acceptance of David Hume’s (1711–1776) rejection of necessary causal connections, it should not be surprising that Christians working in the in the Anglo-American Analytic tradition have embraced occasionalism. David Hume was not an occasionalist. Indeed, given his critique of religion, many have thought him to be an atheist. He was certainly not a friend of Christianity (and he was especially disparaging of Catholicism). However, like Ghazālī, he famously denied that we could know natural beings as proper causes of effects. In *An Enquiry Concerning Human Understanding*, he first reasons to this conclusion by reducing necessity to the unqualified, *a priori* necessity of mathematics and showing that observation of nature permits of no such necessity. This is because it is always logically possible for a posterior event

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ontological claim that nature does not exist as causal, will still place the theist in a position where he cannot coherently assent to the first line of the credo.

<sup>25</sup> For a recent account of medieval nominalism culminating in William of Ockham, along with an Aristotelian-Thomistic response, see the author’s 2020: “The Logical Terms of Sense Realism: A Thomistic-Aristotelian & Phenomenological Defense,”. With the denial of secondary being/substance (οὐσία), genus, species, and difference, as set down by Aristotle in *Categories* 5, human beings can no longer claim to know the essences and natures of particular beings (primary being/substance) in the world. Not knowing what an apparent natural agent is essentially/formally, human knowledge can no longer explain how the natural agent is the cause of its supposed effect. On this approach, then, it is fitting to simply deny that natural beings are causal agents all together and attribute natural events to the sole and direct creative agency of God.

<sup>26</sup> Following Lee 2008, see 1674–75: (OCM II, 312 / Search 448).

(“effect”) not to be, i.e., it implies no contradiction.<sup>27</sup> Since we can conceive of the sun not rising tomorrow—i.e., this implies no contradiction and is logically possible—Hume holds that it is no sense necessary that the sun rise when it rises.<sup>28</sup> Hume, then, reduces our knowledge of cause and effect to a habit of the mind, as Ghazālī had done:<sup>29</sup>

...the knowledge of this relation [between cause and effect] is not, in any instance, attained by reasonings a priori; but arises entirely from experience, when we find, that any particular objects are constantly conjoined with each other.

As with Al-Ghazālī, Hume finds our knowledge of nature to consist in the apprehension of atomistic events, merely side-by-side or customarily conjoined in temporal relation without real causal contiguity:<sup>30</sup>

In a word, then, every effect is a distinct event from its cause. It could not, therefore, be discovered in the cause, and the first invention or conception of it, *a priori*, must be entirely arbitrary.

Hume further reasons that we cannot know causes in nature as we do not know the “secret structure of parts,”<sup>31</sup> by which a supposed agent might produce its effect. For example, we do not know the form by which bread results in nourishment. Because of this fact, there is no “middle” term linking cause and effect in a syllogism—such that we could demonstrate some subject to be the cause of some effect.<sup>32</sup>

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<sup>27</sup> Hume 1748: *Enquiry*, §2, 14: “What never was seen, or heard of, may yet be conceived; nor is anything beyond the power of thought, except what implies an absolute contradiction.”

<sup>28</sup> Hume 1748: *Enquiry*, §4, 24.

<sup>29</sup> Hume 1748: *Enquiry*, §4, 25.

<sup>30</sup> Hume 1748: *Enquiry*, §4, 27.

<sup>31</sup> Hume 1748: *Enquiry*, §7–13, 26. In §12, it becomes apparent that we could never know the natures, essences and powers of natural beings as Hume naively accepts a Cartesian impressions based theory of knowledge, in principle divorcing the mind from things known. For a recent response in the phenomenological and Thomistic traditions, see my 2021: “On the Foundational Compatibility of Phenomenology & Thomism”.

<sup>32</sup> Hume 1748: *Enquiry*, §4, 29–30. In Aristotle, the form of the agent would provide the middle term in a demonstration (categorical syllogism) showing a subject to be the cause of an effect. This topic will be treated in detail below.

Recently, Christian philosophers of the analytic persuasion working in this Humean tradition, have adopted and defended occasionalism. Beginning with Hume's reductive approach to our experience of causation, Hugh J. McCann and Jonathan L. Kvanvig go further than Hume, not only denying that we can know what is temporally prior as the cause of what is posterior in nature, but also that ontologically what is prior cannot be the cause of what is posterior as God is the only cause.<sup>33</sup> They take this approach in order to reject deism and champion divine immanence and God's intimate, personal, and providential relation to nature believing that, if creation is properly causal, then God cannot also act in and through it.

The influential Alvin Plantinga<sup>34</sup> has also defended occasionalism. Plantinga sides with Hume's analysis of our experience of cause-effect relations in order to reject the claim that created beings have causal powers. Having given a cursory presentation of St. Thomas' approach by appeal to primary and secondary cause—without presenting the Aristotelian model of natural causation and necessity that Thomas is presupposing—Plantinga then argues rhetorically that we should abandon natural causation and accept the occasionalist doctrine:<sup>35</sup>

Perhaps the main difficulty here, is that the very idea of creaturely causality is obscure. Of course we can use other terminology: we can speak of forces, or powers, or bringing it about that, or...But do we really understand any of these locutions when we are speaking of creatures? Is there a reasonably clear and coherent concept or idea associated with these terms? It pains me to agree with Hume, but is he not right here?

Most recently, taking inspiration from Plantinga, and finding roots in Reformed tradition theologian, Jonathan Edwards,<sup>36</sup> Walter Schultz and Lisanne D'Andrea-

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<sup>33</sup> See again, "The Occasionalist Proselytizer: A Modified Catechism." For an extended treatment of and Thomistic response to McCann and Kvanvig, see chapter six of my 2010: *A Thomistic Critique of Occasionalism From Natural Causality, Divine Omnipotence, And the Psychology of Human Agency*.

<sup>34</sup> See Plantinga 2008: "What is Intervention?" 380–81 and 392–93; and 2016: "Law, Cause, and Occasionalism".

<sup>35</sup> Plantinga 2016: "Law, Cause, and Occasionalism," 141. Really, Plantinga's argument is merely rhetorical. It should be noted that Plantinga qualifies his occasionalism as a "weak" form, allowing for causation in human action with respect to "decisions, volitions, and undertakings."

<sup>36</sup> Edwards 1758: *Original Sin*, 401: "The existences (so to speak) of an effect, or thing dependent, in different parts of space or duration, though ever so near one to another,

Winslow have defended a version of occasionalism they call “divine compositionism.” Divine Compositionism is Al-Ghazali’s occasionalism applied to contemporary physical theory (atomic and quantum). First, these contemporary occasionalists treat major physical forces of the universe as God’s “existence-conferring action”: “Forces are *ways* God confers existence. Energy is

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don't at all coexist one with the other; and therefore are as truly different effects, as if those parts of space and duration were ever so far asunder: and the prior existence can no more be the proper cause of the new existence, in the next moment, or next part of space, than if it had been in an age before, or at a thousand miles distance, without any existence to fill up the intermediate time or space. Therefore the existence of created substances, in each successive moment, must be the effect of the immediate agency, will, and power of God. If any shall say, this reasoning is not good, and shall insist upon it, that there is no need of any immediate divine power, to produce the present existence of created substances, but that their present existence is the effect or consequence of past existence, according to the nature of things; that the established course of nature is sufficient to continue existence, where existence is once given; I allow it: but then it should be remembered, what nature is, in created things: and what the established course of nature is; that, as has been observed already, it is nothing, separate from the agency of God; and that, as Dr. Taylor says, ‘God, the original of all being, is the ONLY cause of all natural effects.’ A father, according to the course of nature, begets a child; an oak, according to the course of nature, produces an acorn, or a bud; so according to the course of nature, the former existence of the trunk of the tree is followed by its new or present existence. In the one case, and the other, the new effect is consequent on the former, only by the established laws, and settled course of nature; which is allowed to be nothing but the continued immediate efficiency of God, according to a constitution that he has been pleased to establish.” Something of a Platonist, Edwards held that the divine ideas by which God creates are ontologically equal to the created things to which they correspond. In creation, there is no ontological value added to what is created beyond the divine idea, but only a ‘formal’ difference. Everything is ideas, and the divine Ideas are actually most real. See, c.1716: “The Mind,” in *Scientific and Philosophical Writings*, (WJE Online Vol. 6); cf., Wainwright “Jonathan Edwards”, Stanford Encyclopedia of Philosophy <<https://plato.stanford.edu/archives/win2016/entries/edwards/>> ; and, finally, Schultz and D’Andrea-Winslow 2017: “Divine Compositionism as Occasionalism,” 220–223. By asking what a formal difference when applied to the ‘idea’ that God has created is, this theory falls to incoherence. Schulz and D’Andrea-Winslow continually refer to the created idea as ‘actual,’ implying that the divine idea is potential. But then, what is ‘actual’ except to say a higher, more complete level of existence, which was potential? Certainly, in the Latin and Greek tradition going back to Aristotle ‘actuality’ means, precisely, the complete *existence* of what is intended (this is the meaning of ἐντελέχεια in Aristotle). It seems, then, that what God creates is both more in terms of existence and not more in terms of existence (P · ~P).

the measure of magnitude (in various forms) of God's existence-conferring action."<sup>37</sup> Second, and following Planck and a theory they call "wave function realism," Schultz and D'Andrea-Winslow hold that the physical universe, at the micro and macro level, is a discrete series of definite existents that entirely cease to be with the collapse of the wave and are then reconstituted as existents with certain dispositions. When wave function collapses, then, God alone decides and causes a new subsequent existent with its disposition. God alone causes the physical system or the universe to exist and God alone is causally responsible for causing this new existent with this disposition rather than another after every wave function collapse. Essentially, this theory holds that the physical world is constantly "flashing" in and out of existence, and that God's creative act just is the reconstitution of reality at every new discrete instant:<sup>38</sup>

*Divine compositionism* takes collapses of wave function to be God's conferring definite existence. It is that system's existence *then* and *there*. Therefore, when viewed ultimately either as a dynamic distribution of mass/energy or as discrete regular collapses of wave functions, the physical world *is* God's acting.

Denying that created beings have causal powers, these occasionalists then hold that the perceived regularity of the universe, which contemporary physics describes as processes determined by laws, is actually only a result of God acting on a condition with a regular result.<sup>39</sup> So, when a vase shatters after being struck,

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<sup>37</sup> Cf. Schultz and D'Andrea-Winslow 2017: "Divine Compositionism as Occasionalism," 224. One might wonder how God's creative act is not conflated with mutable, material reality and, consequently, divine simplicity, immutability, and transcendence are not violated. It is difficult to see how this approach would not take the believer back to the worship of the golden calf.

<sup>38</sup> Schultz and D'Andrea-Winslow 2017: "Divine Compositionism as Occasionalism," 225. See also 224–225: "A wave function collapse is the event of one of those possible configurations being realized or 'localized' at  $t$ . The system ceases to behave like a wave at that moment." And "According to John Bell's version of a Ghirardi-Rimini-Weber interpretation of quantum mechanics (GRWf), the wave function of a physical system—be it a single particle or a macro-scopic object—collapses ('flashes') spontaneously at a regular rate, 107 times per second." Finally: "Accordingly, the existence and properties of every physical system ('substance') are a matter of its wave function  $\Psi$  spontaneously 'collapsing.' Mass and energy are properties of physical systems. Thus, at every moment when the universal wave collapses we have a distribution of mass/energy."

<sup>39</sup> While these divine compositionists believe that this is a novel addition to occasionalist theory, it is not. In fact, Al-Ghazali makes a similar claim in order to explain why it is that we should not be in constant fear that God will create the world pell-mell. Thus, he holds

for example, it is not on account of the weak atomic bond of its atoms (a disposition), but rather it is on account of the fact that God has chosen to cause shattering as a consequence of such an event and disposition, of which He is also the only, direct, and immediate cause.<sup>40</sup>

Generally, what these thinkers show us is that theists who have accepted an atomistic and Humean event ontology or causal model in lieu of Aristotelian natural causation, will see occasionalism as the most reasonable approach to understanding God's creative act. And yet, we must say that this position does not seem to comport well with basic human experience of the world, nor with the belief that God is the omnipotent creator of the world. It is hard to understand how it is that the key is not a cause of the opening of the lock, or that the form and the matter of the house joined by the carpenter do not cause it to be a house, or that the surplus of an electron in the outer valence of sodium (NA) and the need for an electron in the outer valence of chlorine (CL) do not causally result in the bonding of the elements in salt, or that or that the union of sperm and ovum and syngamy do not result in the zygote in sexual reproduction. Further, if God does not create the antecedent beings in such events to be the causes of such consequents, but God alone causes these effects, what is it that God is creating? It seems difficult, if not impossible, to believe that God has

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that I do not need to worry as to whether or not the book I left in my library at home may now in fact be a horse "that has defiled the library with its urine and dung," since I can be assured that God will continue to create in my mind the knowledge that this in fact has not happened nor will it. See, c.1095: *The Incoherence II*, d17.15 (170).

<sup>40</sup> Cf. Schultz and D'Andrea-Winslow 2017: "Divine Compositionism as Occasionalism," 228–9: "We can perceive something's existence, but we cannot perceive *God's conferring* its existence. This is *why* we cannot perceive causation; we infer it. Physical causation, then, *is* God's existence-conferring action (i.e., speaking, thinking, imagining, creating)—God's REAL-izing a world state—in accordance with some commitment on His part to do so on a condition of His REAL-izing some previous world state—and all of this is according to the *actual world*, which is God's plan." And, on 229: "More specifically, causation is God's compositionally conferring existence over a sequence of discrete frames for time according to his commitments. Causation, therefore, turns out not to be a fundamental feature of nature, that is, it is not (ontologically) primitive in a naturalistic sense. What seems to be a causal relation between events (or states of systems), therefore, just *is* God's REAL-izing both events according to a commitment. Thus, an 'occasional cause' is a situation or event that satisfies a condition of one of God's commitments to act on a condition. Such divine commitments link to situations, giving us causal relations and, when generalized, they give us laws of succession."

created a key that is also not capable of opening a lock, concrete, wood, etc., along an architectural form and the carpenter that are not the cause of the house being, sodium and chlorine that do not causally tend toward being salt when in proximity on account of atomic structure, or sperm and ovum that do not causally result in the production of the zygote. If these beings are not created as causally ordered toward these ends as a result of what they are, what is it that God has created? Can I really believe that an all-powerful God creates a world where these beings only seem to be responsible for “effects,” which are really just cases of God’s agency? Again, what has God created? I don’t know in such a world. Moreover, if these really all just examples of God acting as creation, how is that God transcends creation? It would, on this occasionalist approach, that what we commonly think to be natural or created agency really just is God—God is creation and its mutable changes. These questions point to the need for an alternative account, if one is to form the belief that God is the omnipotent and transcendent creator of the world. This account is readily available in the philosophy of nature and the natural theology of St. Thomas Aquinas.

### 3. Principles for a Natural Theology of Creation via Primary & Secondary Cause

The principles that St. Thomas employs in giving his account of creation are the Aristotelian principles and causes of nature and the Avicennian distinction between essence (*essentia*) and existence (*esse*). This section will proceed by giving an account of these principles, and then it will show how they are used by St. Thomas in his natural theology to give an account of the relation between God as Creator and the created, natural world.

#### 3.1. Hylomorphism & Natural Causation

For the Aristotelian, using a proper *empirical* method beginning with sense-perceptive knowledge better-known to us,<sup>41</sup> because natural beings are capable of change, it is further necessary that every natural being be a *hylomorphic*

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<sup>41</sup> See Aristotle c.353–47bc: *Physics* I.1, and St. Thomas’ commentary 1268–69 on the *Physics* along with his 1252/56b: *De principiis naturae* for accounts paralleling Aristotle. By ‘empirical’ I mean what Aristotle intended by the term ἐμπειρία—sense-perceptive experience constituting knowledge of fact. I do not mean ‘empirical’ in the sense of modern positivistic theories, which reduce what can be known to extended, measurable stuff that can be seen, touched, etc.

complex of subject/matter and form.<sup>42</sup> Given the existence of natural beings as changeable or in motion, these principles are necessary by *reductio ad impossibile*: without a persisting subject, a formal disposition, and privation, change as it is manifest in sense experience, would be impossible. However, and because change is manifest in observation, it is necessary to posit these principles of nature. Further, natural beings—inorganic and organic—are distinct from other beings in the world (i.e., artifacts) as they possess an internal, *per se* or essential principle of motion to the end-forms in which they regularly terminate.<sup>43</sup> In natural beings, matter is the principle of *can-be-ness* or potentiality (δύναμις) while form is the principle making a thing to be what it is in a perfective, completed, and actual sense (ἐντελέχεια), this also being the essence (το τί ἦν εἶναι) the expression of which constitutes a definition (τί ἐστι).<sup>44</sup> It is necessary that all natural beings have a primary/ultimate material potentiality, not reducible to form/act, lest we would live in a static and unchanging Parmenidean universe (a manifest impossibility)—everything that existed would be perfect or complete, so that motion would not be.<sup>45</sup> Accordingly, proper explanation of natural beings, comes by the expression of *per se*/essential material and formal causes. In turn, natural beings are capable of distinct movements—they are agent causes—through their forms. For the Aristotelian, and contrary to Al-Ghazalian and Humean approaches, natural beings are agent causes *simultaneously* with their effects, through their distinctive forms or actual states.<sup>46</sup> The carpenter has the potential to build a house, e.g., on account of the formal disposition he has taken on (muscle memory for building acts, intellectual virtues pertaining to geometry, etc.). To use natural inorganic examples, though they are both made of carbon (matter), the diamond *can be* used in blades for the cutting action of concrete and other hard materials as a result of its formal atomic structure (continuous cubic bond), whereas the graphite cannot be used in such blades as its form (plane hexagonal

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<sup>42</sup> See Aristotle c.353–47bc: *Physics* I.5–7.

<sup>43</sup> c.353–47bc: *Physics*, II. 1.

<sup>44</sup> c.353–47bc: *Physics*, II. 1 and 3.

<sup>45</sup> Cf. c.353–47bc: *Physics* I.8–9. Other scholastics—e.g., Scotus and Suarez—did not come away with this interpretation, but posited matter as somehow in act. Logically, this error would lead us to false conclusions, as will be seen, such as that nature is not contingent and, thus, that nature does not require a transcendent Creator.

<sup>46</sup> See c.353–47bc: *Physics* II.7, where Aristotle expressed the convertibility of form, agent, and end (he calls them one).

layering) does not permit of such an action. Continuous cubic bond is the cause of locked-together unity resistant to division, whereas plane hexagonal layering, without inter-locking, permits of sliding on itself facilitating division. In embryonic ontogenesis, the layered division of cells into the ectoderm (outer layer), the mesoderm (middle layer), and the endoderm (inner layer) constitutes the genetic agent causes in the production of tissues (skin, nails, hair, brain, nervous tissue and cells, nose, sinuses, mouth, anus, tooth enamel), muscles, bones, heart tissue, lungs, reproductive organs, lymphatic tissue, and the lining of lungs, bladder, digestive tract, tongue, tonsils, and other organs.<sup>47</sup> To borrow an example from Aristotle, the marsh-dwelling bird is capable of moving through the swamp in the manner that it does because it possesses a form of long legs and clawed toes (as opposed to short and webbed).<sup>48</sup> Or, the pangolin (same family as the anteater) can have the effect of rolling down a slope to evade a predator on account of the fact that it can put its body in a roughly circular/spherical shape. Similarly, the human being is capable of the effect of walking through the bipedal form; of using refined tools like knives, writing and eating utensils, keyboards, of throwing baseballs, etc., on account of the form of fingers and opposable thumbs. Or, again in the case of the human being, the apprehension of being and universals (the form of the intellect) explains how human agents are capable of forming judgements and of syllogistically reasoning from premises to conclusions (theoretical and practical).<sup>49</sup>

Natural form not only provides intelligibility for natural agent causation, it also provides intelligibility for end-directed or teleological movements of nature. The motions of nature regularly terminate in complete formal states—they are not for the sake of that out of which they come to be, i.e., matter, but they are ordered toward completed formal states of existence as their proper end, goal, completion, or perfection. Nature is an order of itself with its own intrinsic causal integrity—it has purpose and a point. Moreover, the natural philosopher is capable of grasping demonstratively those causes that are necessary on the supposition that a given natural end is to be achieved in the manner it actually is

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<sup>47</sup> Encyclopedia of Children’s Health: <<http://www.healthofchildren.com/P/Prenatal-Development.html#ixzz4zdvfGogg>>

<sup>48</sup> See Aristotle c.330BC: *On Parts of Animals*, I.1 (694b5–17).

<sup>49</sup> For Aristotle’s treatment of agent cause, see c.353–47BC: *Physics*, II.3. For an excellent account and defense of the Aristotelian conception of the coming-to-be of knowledge through the four causes in general, see Wallace 1995: *The Modeling of Nature*, 114–156.

achieved.<sup>50</sup> On the supposition that carbon is to cut steel, for example, it is necessary that it have the disposition of the cubic bond; for the marsh-dwelling bird to live and walk as it does in the swamp it must have its long legs and long-clawed toes; for the human to form judgements and reason, the formal power of the intellect in apprehension of being and the universal is necessary, and so on. And here we have our Aristotelian response to Hume's critique of causation from logical possibility: as Aristotle taught in antiquity, the necessity of nature is not unqualified or mathematical, but it is qualified on the supposition or condition of the end.<sup>51</sup> The contingency of nature is real, as natural movements can be impeded. Yet, we are quite capable of identifying what causes are necessary in terms of material, form, and agent given that there is or is to be distinct end.

Analysis of the phenomena shows that the atomism and causal reductionism of Al-Ghazali and Hume need not be accepted. Human knowledge is capable of knowing agent and final causes by identification of the natural forms by which natural beings act and in which their movements terminate. While many sources of agency may well remain secret to us, the fact that we are able to disclose the formal sources of agency and end-directedness in many cases such as these makes it most reasonable to assume that nature possesses its own intrinsic causal power distinct from that of God.

### 3.2. Essence-Existence Composition, Contingency, and the Necessity of a Creator God

To this Aristotelian causal framework, Thomas adds the real distinction between essence and existence in all natural beings. In natural beings, it is impossible that essence and existence be one/identical, for then we would include *existence* (*esse*) in our definitions of them and they would consequently have to exist without qualification and be unchangeable (a manifest contradiction).<sup>52</sup> Thus, all

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<sup>50</sup> Cf. c.353–47bc: *Physics* II.1, 3, 8, and 9, and also c.330bc: *On Parts of Animals* I. Aristotle treats necessity on the hypothesis/supposition (ἐξ ὑποθέσεως) of the end at *Physics* II.9. For an excellent treatment of suppositional necessity and the insights of St. Albert and St. Thomas Aquinas on the subject, see Wallace 1980: “Albertus Magnus on Suppositional Necessity”.

<sup>51</sup> Hume was either unaware of Aristotle's conception of natural necessity, or he simply ignored it in *An Enquiry*.

<sup>52</sup> Thomas is following Avicenna, *Metaphysics of the Healing*, I.8–9. See, *De ente et essentia*, capita 1–4 (especially 4).

natural beings are contingent, not only as hylomorphic, but especially as essence-existence composites.

As Aristotle had already shown, the fact that natural beings are contingent on prior natural causes for their coming to be in the way they come to be, and as there cannot be an infinite regress in the comings to be of natural beings, necessitates that there be a primary un-moved mover, lacking potentiality altogether, being separate from material nature as pure act, and providing the ultimate source and intelligibility for the existence of nature.<sup>53</sup> Famously, St. Thomas' second way of demonstrating the fact<sup>54</sup> of God's existence is a species of Aristotle's un-moved mover argument, focusing specifically on agent cause and substantial change. Since all natural beings have prior agent causes of their existence, and there cannot be an infinite regress in explanation of natural agent causes, it is necessary that there be a primary agent cause of the existence of natural beings.<sup>55</sup> If this is denied, what is manifest from observation, namely, that contingent agent causes of existence exist, must be contradicted.

### 3.3. Orders of Primary & Secondary Cause

Having demonstrated the existence of God as the first agent of existence, St. Thomas established the distinction between two orders of causation: divine/primary and natural/secondary. At *SCG* III, c.65, treating the doctrine of conservation, then, St. Thomas appeals to the distinction between essence and existence, expressing that God is the primary cause of the existence of all created beings. Hylomorphic beings constitute a system of real secondary causes. However, since such beings are not sufficient for explaining their own existence

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<sup>53</sup> Cf. c.353–47bc: *Physics* VII & VIII.

<sup>54</sup> On Thomas' approach to arguments for God's existence as demonstrations *quia*, see his commentary on Aristotle's *Metaphysics* (1270/71) lib.6, lec.1, n.1170. That St. Thomas understood the unmoved-mover argument as a *quia* demonstration is also explicitly clear at 1259/65: *SCG* lib.I, c.12, n.7.

<sup>55</sup> 1266–68: *ST* Ia, q.2, a.3; 1259/65: *SCG* lib.1, c.13. At *SCG* lib.3, c. 65, n.4, in treating conservation, Thomas gives another version of the second way, arguing for God as the first unqualified cause of existence of the species of things from the fact individual members of the species cannot be unqualified causes of the existence of others, as then they would have to be the cause of the species. In Aristotelian manner, he shows that a contradiction would follow if this position is not held—namely, that a natural cause, like a human, would have to be the cause of its own existence and that of the species, which is impossible.

or the existence of the whole of nature, God's act as primary cause of the existence of the world must be supposed. As Thomas puts it: "...no body is the cause of the existence (*esse*) of another thing, to the extent that it exists (*esse*), but it is the cause of it [to the extent] that it is *moved* to exist (*ad esse*), which is the becoming of the thing."<sup>56</sup> "And so," says Thomas, "it is necessary that God Himself, who is His own existence (*esse*), be primarily and *per se* the cause of the existence (*esse*) of every [other] being."<sup>57</sup> In this manner, St. Thomas has worked from the principles of nature to the conclusion that complete explanation of the natural world requires an appeal to orders of natural and divine causation. Beings in the world are real causes in the natural order, and we can explain them in terms of material, formal, agent, and final cause. However, because the causation of created beings as matter-from and essence-existence composites is not sufficient to explain the existence of natural being, it is necessary to hold that God is the primary cause—i.e., the transcendent and omnipotent Creator—of the existence of the natural world. This is a novel and ingenious account of creation, upholding at one and the same time the belief in natural causes and the belief in God as omnipotent Creator.

#### 4. St. Thomas' Critique of Occasionalism from Divine Omnipotence<sup>58</sup>

Both in his *Summa Contra Gentiles* and in his *Summa Theologiae*, St. Thomas appeals to the distinction between primary and secondary causation in order to explain God's providential action and conservation. Because God is the unqualified cause of the existence of creation, and no created being can confer existence without qualification, it is necessary that God is the cause of existence all at once and totally. God's act of creation in causing existence, then, must

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<sup>56</sup> 1259/65: *SCG*, lib.3, c.65, n.5: "Nullum igitur corpus est causa esse alicuius rei in quantum est esse, sed est causa eius quod est moveri ad esse, quod est fieri rei." The translation of St. Thomas are my own.

<sup>57</sup> 1259/65: *SCG*, lib.3, c.65, n.5: "Et sic oportet quod ipse Deus, qui est suum esse, sit primo et per se causa omnis esse." On the identity of essence and existence in God, see also, *ibid*, lib.1, c.22.

<sup>58</sup> Significant portions of this article are taken chapter IV of my 2010: *A Thomistic Critique of Occasionalism From Natural Causality, Divine Omnipotence, And the Psychology of Human Agency*.

mean that God initiated created beings' existence *and conserves* them in their continued existence and operation (the rejection of deism):<sup>59</sup>

However, just as God not only gave existence to things when they first began to exist, causing existence in them, and conserving things in existence (*in esse*) ...so also, not only when things are first produced did he give them operative powers, but He always causes these to be in things.

Some theologians, Thomas notes, have taken this doctrine of conservation to entail occasionalism. At *Summa Contra Gentiles* III, c. 69, Thomas describes the occasionalist position by noting that, from the conclusion that God is omnipresent and immanent in all creation as the primary cause of existence, some have fallen into error by inferring that "...no creature has any act in the production of natural effects."<sup>60</sup> He illustrates the position with Al-Ghazali's example: "...so, for example, fire does not cause heat, but God causes heat present with the fire, and it is the same, they say, in all other cases of natural effects."<sup>61</sup> In his *Summa Theologiae* I, q. 105, a. 5 Thomas again presents the occasionalists' position,<sup>62</sup> noting that they held "no created power acts in anyway in things, but that God alone acts *immediately* in every [form of agency]; thus, for example, fire would not [have the act] to produce heat, but God in the fire, and similarly in all other such things."<sup>63</sup> In both these texts, Thomas considers

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<sup>59</sup> 1259/65: *SCG*, lib.3, c.67, n.3: "Sicut autem Deus non solum dedit esse rebus cum primo esse incoeperunt, sed quandiu sunt, esse in eis causat, res in esse conservans, ut ostensum est; ita non solum cum primo res conditae sunt, eis virtutes operativas dedit, sed semper eas in rebus causat."

<sup>60</sup> 1259/65: *SCG*, lib.3, c.69, n.1: "Ex hoc autem quidam occasionem errandi sumpserunt, putantes quod nulla creatura habet aliquam actionem in productione effectuum naturalium: ita scilicet quod ignis non calefacit, sed Deus causat calorem praesente igne; et similiter dicunt in omnibus aliis effectibus naturalibus." — "From this [conclusion], however, there are some who have taken the occasion to error, positing that no creature has any act in the production of natural effects, so, for example, fire does not heat, but God causes heat present with the fire, and it is the same they say in all other cases of natural effects."

<sup>61</sup> 1259/65: *SCG*, lib.3, c.69, n.1.

<sup>62</sup> St. Thomas is aware of this attack by way of the reports of Maimonides.

<sup>63</sup> 1266–68: *ST* Ia, q.105, a.5, c.: "Respondeo dicendum quod Deum operari in quolibet operante aliqui sic intellexerunt, quod nulla virtus creata aliquid operaretur in rebus, sed solus Deus immediate omnia operaretur; puta quod ignis non calefaceret, sed Deus in igne, et similiter de omnibus aliis." — "I respond, it must be said that some have judged

two primary occasionalist objections to secondary causation. The first is that natural secondary cause is superfluous if God causes natural effects. As creator, God causes natural effects and God's primary causality does not admit of any insufficiency. Thus, there is no need for secondary causes. The second objection is that the same effect cannot proceed from both God and a natural cause. No effect proceeds as a whole from two distinct agent causes. If the natural effect is the result of God's primary causality, then it cannot also be the result of a natural secondary cause. The occasionalist, then, understands the relation of primary to secondary cause in terms of an exclusive disjunction: either God is the cause of natural effects, or nature is; it cannot be both.

Thomas opens his critique of occasionalism by arguing that, if the pattern of cause and effect in nature is denied, a lack of power will be immediately implicated in the creator. An agent's power is the source of it giving an effect a causative capability.<sup>64</sup> An effect with less causal capability is, therefore, indicative of a weaker cause. As Thomas says in *SCG*: "The perfection of the effect demonstrates the perfection of the cause, for more power [in the agent] leads to a more perfect effect."<sup>65</sup> Occasionalism implicates a lack of power in the creator, then, because more power is required to create a world in which created things act according to their own causal powers than to simply create a world in which created things are directly caused by God alone.

God causes creatures to exist in such a way that they are the true causes of their own operations. Thomas does indeed hold that God is at work in every operation

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that God acts in anything acting in any manner such that no created power acts in anyway in things, but that God alone acts immediately in every [form of agency]; thus, for example, fire would not [have the act to] heat, but God in the fire, and similarly in all other such things."

<sup>64</sup> 1266–68: *ST* Ia, q.105, a.5, c.: "Hoc autem est impossibile. Primo quidem, quia sic subtraheretur ordo causae et causati a rebus creatis. Quod pertinet ad impotentiam creantis, ex virtute enim agentis est, quod suo effectui det virtutem agendi." — "This [i.e., occasionalism], however, is impossible. First, indeed, because it would eliminate the order of cause and what is caused [i.e., effect] from created things, and this immediately implies a lack of power (*impotentiam*) in the creator since it is from the power (*virtute*) of the agent that the agent gives the power of acting to its effect."

<sup>65</sup> 1259/65: *SCG* lib.3, c.69, n.15: "Perfectio effectus demonstrat perfectionem causae: maior enim virtus perfectiorem effectum inducit."

of nature,<sup>66</sup> but the causal autonomy of nature is not thereby reduced.<sup>67</sup> That there are real natural causes and effects does not indicate a reduction in God's power. To create a world in which effects are produced by their own natural causes is to create a world richer in reality than a world in which effects are directly produced by God without natural causal powers. Thus, to hold the occasionalist view that God directly produces secondary effects by his primary causality to the exclusion of natural secondary causation violates the doctrine of divine omnipotence. As Thomas says in conclusion: "...to take away the perfection of creatures is to take away the perfection of divine power."<sup>68</sup>

Thomas extends this critique of occasionalism from causation in general to a critique from purposive causation or the teleology of nature:<sup>69</sup>

Second, [occasionalism must be rejected] because the active powers that are discovered in things would be attributed to them to no purpose, if nothing was performed by them. Indeed, all created things would seem to be without purpose in this manner, if proper acts were removed [from them], since everything is on account of its proper act. For the imperfect is always on account of the perfect, as matter, thus, is on account of form, and also form, which is the primary act, is on account of its action, which is secondary act [*De Anima*, II.1]; and so also, agency is the end of the created thing.

In nature, we observe end-directed order.<sup>70</sup> Natural things appear to be composed of materials that are morphologically ordered making them be the things they are and to able to act in the way they regularly act. This apparent order would be pointless, if the natures of created things were not the actual sources of their operations. If God directly created the natures and functions as

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<sup>66</sup> 1259/65: *SCG*, lib.3, c.67.

<sup>67</sup> 1259/65: *SCG*, lib.3, c.69.

<sup>68</sup> 1259/65: *SCG*, lib.3, c.69, n.15: "Detrahere ergo perfectioni creaturarum est detrahere perfectioni divinae virtutis."

<sup>69</sup> 1266–68: *ST Ia*, q.105, a.5, c: "Secundo, quia virtutes operativae quae in rebus inveniuntur, frustra essent rebus attributae, si per eas nihil operarentur. Quinimmo omnes res creatae viderentur quodammodo esse frustra, si propria operatione destituerentur, cum omnis res sit propter suam operationem. Semper enim imperfectum est propter perfectius, sicut igitur materia est propter formam, ita forma, quae est actus primus, est propter suam operationem, quae est actus secundus; et sic operatio est finis rei creatae."

<sup>70</sup> Cf. Aristotle, *Physics*, II.8.

merely juxtaposed in appearance, as the occasionalists suppose, then the world as it is observed to exist is meaningless. It takes more power, however, to create a world in which the functions actually do arise from the formal natures of things than simply to create forms and functions as apparently causally related. But God is all-powerful, as we say in the Catholic *credo*. Thus, God creates natural beings as truly operating according to their formal natures and the appearance of the order of creation is not meaningless.

Part of the problem to which Thomas is alluding here is the failure to recognize the nature of the distinction between primary and secondary causality. Secondary cause is not a substitute for divine causality, for nothing can operate without God's immanent primary causality. This is because, for all time, no created thing *can be* without God as its primary cause in the order of *esse*. So, the same effect is indeed properly attributed both to God's primary cause and natural secondary cause. The attribution, however, is not made in the same mode or order of causality. It is not as if a natural effect is partly produced by God and partly by a natural cause. Rather, it is wholly produced by both, but in different orders. Explicitly invoking this causal analogy of orders in his critique of occasionalism in the *Summa Theologiae*, Thomas notes, then, "one action does not proceed from two agents in a single order, but, in fact, there is nothing preventing that one and the same action proceed from a primary and a secondary agent."<sup>71</sup> Further elucidation is provided for this analogy of orders in *Summa Contra Gentiles*, where Thomas points out that the relation of primary and secondary cause to the natural effect is analogous to the relations between agent and instrumental causation.<sup>72</sup> Here, in c.70, answering as to "the manner in which the same effect is from God and a natural agent,"<sup>73</sup> Thomas explains the possibility of a single effect proceeding both from a higher-order (primary) agent/moving cause and a lower-order (secondary) instrumental cause.<sup>74</sup> In

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<sup>71</sup> 1266–68: *ST* Ia, q.105, a.5, ad.2: "Ad secundum dicendum quod una actio non procedit a duobus agentibus unius ordinis, sed nihil prohibet quin una et eadem actio procedat a primo et secundo agente."

<sup>72</sup> 1259/65: *SCG*, lib.3, c.70 n.5 and 7.

<sup>73</sup> "Quomodo idem effectus sit a Deo et a natura agente."

<sup>74</sup> 1259/65: *SCG*, lib.3, c.70, n.5: "Haec autem difficultatem non afferunt si praemissa considerentur. In quolibet enim agente est duo considerare, scilicet rem ipsam quae agit, et virtutem qua agit: sicut ignis calefacit per calorem. Virtus autem inferioris agentis dependet a virtute superioris agentis, in quantum superius agens dat virtutem ipsam inferiori agenti per quam agit; vel conservat eam; aut etiam applicat eam ad agendum,

instrumental causation, e.g., when wood is chopped with an axe, the same effect is attributed to the instrument and to the principle agent making use of the instrument. It is not the case that the instrument and the principle cause are partial or co-causes in the sense that each contributes a separate element to the production of the effect. When an axe is used to split wood, the split-wood effect is produced by the axe, for no other instrument is used. It is also produced by the

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sicut artifex applicat instrumentum ad proprium effectum; cui tamen non dat formam per quam agit instrumentum, nec conservat, sed dat ei solum motum. Oportet ergo quod actio inferioris agentis non solum sit ab eo per virtutem propriam, sed per virtutem omnium superiorum agentium: agit enim in virtute omnium. Et sicut agens infimum invenitur immediatum activum, ita virtus primi agentis invenitur immediata ad producendum effectum: nam virtus infimi agentis non habet quod producat hunc effectum ex se, sed ex virtute proximi superioris; et virtus illius hoc habet ex virtute superioris; et sic virtus supremi agentis invenitur ex se productiva effectus, quasi causa immediata; sicut patet in principiis demonstrationum, quorum primum est immediatum. Sicut igitur non est inconveniens quod una actio producat ex aliquo agente et eius virtute, ita non est inconveniens quod producat idem effectus ab inferiori agente et Deo: ab utroque immediate, licet alio et alio modo.” — “These [objections], however, do not pose a difficulty, if our prior principles are taken into consideration. For, in any [natural] agent whatsoever, two things are to be considered, namely the thing itself which acts, and the power (*virtutem*) by which it acts: as, for example, fire produces heat by heat. However, the power of a lower-order agent depends upon the power of the higher order agent, to the extent that the higher order agent gives the power itself to the lower-order agent by which it acts; or conserves it; or also applies it in acting, as the craftsman applies the instrument to its proper effect, though he, nevertheless, does not give the form [to the instrument] by which it acts, nor does he conserve it in being, but rather he gives to it motion alone. It is necessary, therefore, that the act of the lower-order agent not only be from it through its proper power, but also through the power of all higher-order agents, as it acts in accordance with [dependence] the power of all of them. And as the lowest-order agent is seen as immediately active, so also the power of the primary agent is seen as immediate for the production of the effect: for the power of the lower-order agent does not have that which it produces, namely, this effect, from itself, but from the power of the proximate higher-order [cause]; in turn, its power is possessed from the power of the higher-order [cause]; and so the power of the highest order agent is found from itself productive of the effect, as an immediate cause. This point is manifest [also] in the principles of demonstration, where those which are primary are immediate [as the cause of the conclusion]. Therefore, as it is not unfitting that one act be produced from some [natural] agent and its power, so also it is not unfitting that the same effect be produced from a lower-order agent and God: from both immediately, though each in a different mode.”

axe wielder, for the axe does not split wood except by the action of the one who wields it. Taken as a whole, the agency proceeds from both the order of the one wielding and the order of the instrument being wielded, simultaneously. In a similar way, the natural effect is produced by its natural cause in the order of secondary causes *and* God as creator is also responsible for the natural effect in the order of existence.<sup>75</sup> The natural cause produces its natural effect as a temporal process of becoming. God, however, produces the same effect, not as a temporal natural process or any sort of process. Rather, God produces the effect by being the immanent cause of existence in the whole system of temporal cause and effect relations. Appealing to the Aristotelian account of natural causation and the essence-existence distinction, Thomas explains this last point in precise detail in *ST I*, q. 105, a. 5, *responsio*.

Avoiding treating secondary causes as though they usurp God's creative causal power, Thomas shows that God is the primary cause of all three forms of natural agency, i.e., final, agent, and formal causation.<sup>76</sup> First, Thomas points out that

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<sup>75</sup> 1259/65: *SCG*, lib.3, c.70, n.7: "Patet etiam quod non sic idem effectus causae naturali et divinae virtuti attribuitur quasi partim a Deo, et partim a naturali agente fiat, sed totus ab utroque secundum alium modum: sicut idem effectus totus attribuitur instrumento, et principali agenti etiam totus." — "It is also clear that the same effect is not attributed to the natural cause and divine power as though it is partly produced by God and partly produced by the natural agent, but it is attributed wholly to both according to different modes, just as the same effect as a whole is attributed to the instrument and also to the principle agent as a whole.

<sup>76</sup> Matter is not the source of agency, but the subject which receives the effect of an action. 1266–68: *ST Ia*, q.105, a.5, c.: "Sic igitur intelligendum est Deum operari in rebus, quod tamen ipsae res propriam habeant operationem. Ad cuius evidentiam, considerandum est quod, cum sint causarum quatuor genera, materia quidem non est principium actionis, sed se habet ut subiectum recipiens actionis effectum. Finis vero et agens et forma se habent ut actionis principium, sed ordine quodam. Nam primo quidem, principium actionis est finis, qui movet agentem; secundo vero, agens; tertio autem, forma eius quod ab agente applicatur ad agendum (quamvis et ipsum agens per formam suam agat); ut patet in artificialibus. Artifex enim movetur ad agendum a fine, qui est ipsum operatum, puta arca vel lectus; et applicat ad actionem securim quae incidit per suum acumen. Sic igitur secundum haec tria Deus in quolibet operante operatur." — "In this manner, thus, it must be understood that God acts in things, and that these things themselves, nevertheless, possess proper actions. In evidence of this, it must be considered that, while there are four kinds of causes, matter is not properly a principle of action, but itself considered as the subject receiving the effect of the action. End, agent, and form, however, are themselves properly considered as principles of action, though in

every operation, whether volitional or non-volitional, aims at some good, either real or apparent. It follows that every good, whether real or apparent, derives its good from the ultimate good at which it aims. The absolutely supreme good from which every directed natural process derives its goodness is God, the source and creator of all. Clearly, then, God is at work in every natural process as its ultimate end and final cause.<sup>77</sup> With respect to natural agent causes, Thomas notes that wherever there is a series of causal agents, as is apparently the case in nature, the posterior cause always operates in virtue of the prior cause. The ultimate causal agent prior to every natural cause and all secondary causal series is God, the source and ground of the being of all agency. It follows that God is at work in every natural operation as the source of agency.<sup>78</sup> Finally, with respect to formal causation, Thomas remarks that God's primary causality is not limited to agency (efficient causation), but that God is also the creator and conserver of the forms of natural things by which they act in the way they apparently act.<sup>79</sup> Thomas can

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a certain order. For first, indeed, the principle of action is the end, which moves the agent; but second, [there is] the agent; third, however, there is the form of that which is applied by the agent in acting (although the agent itself also acts through its own form); as is clear in the productions of artifice or craft. For the craftsman is moved to act by the end, which is itself what is being produced—think, for example, of the chest or the bed; and he applies the axe to the action which cuts by its sharpness. In this manner, therefore, according to these three [forms of agency] God acts in every agent cause.”

<sup>77</sup> 1266–68: *ST Ia*, q.105, a.5, c: “Primo quidem, secundum rationem finis. Cum enim omnis operatio sit propter aliquod bonum verum vel apparens; nihil autem est vel apparet bonum, nisi secundum quod participat aliquam similitudinem summi boni, quod est Deus; sequitur quod ipse Deus sit cuiuslibet operationis causa ut finis.”— “First, indeed, according to the principle of end/finality. This is because every act is for the sake of some true or apparent good; nothing, however, is or appears to be the good, except to the extent that it participates in a certain likeness of the highest good, which is God; it follows that God Himself is the cause of every act whatsoever as the end or final cause.”

<sup>78</sup> 1266–68: *ST Ia*, q.105, a.5, c.: “Similiter etiam considerandum est quod, si sint multa agentia ordinata, semper secundum agens agit in virtute primi, nam primum agens movet secundum ad agendum. Et secundum hoc, omnia agunt in virtute ipsius Dei; et ita ipse est causa actionum omnium agentium.”— “Similarly, it must also be considered that, if there are multiple agents being ordered, the secondary agent always acts through the power of the primary, for the primary agent moves the secondary to act. According to this [fact], all things act through the power of God Himself; and, thus, He is the cause of the acts of every agent.”

<sup>79</sup> 1266–68: *ST Ia*, q.105, a.5, c.: “Tertio, considerandum est quod Deus movet non solum res ad operandum, quasi applicando formas et virtutes rerum ad operationem, sicut

then conclude that “...God acts in every acting cause.”<sup>80</sup> Because it takes more power to create purposive natural beings that act through their own forms, rather than a world where these forms of causation are merely apparent, occasionalism’s denial of these forms of secondary causation violates divine omnipotence.

In reply to occasionalism, then, Thomas affirms that God’s primary causality is sufficient for the production of the natural effect and that an effect cannot be produced as a whole from two distinct causes. He argues, however, that it does not follow that the secondary cause is superfluous (ad 1)<sup>81</sup> nor that the same effect cannot result from both a primary and secondary cause, distinct in order/mode (ad 2).<sup>82</sup> God’s omnipotence not only excludes the possibility that his agency is insufficient, but also excludes the possibility that he creates a world in which natural causal powers do not exist and only appear to exist. To deny real causal powers to natural things is to imply a lack of power in God.

Occasionalists consider causality in a single mode and, therefore, think that secondary cause can only exist as a substitute for the primary cause of the divine creator. Thus, they mistakenly think that they are compelled to admit secondary cause only at the expense of primary cause. Thomas shows us, however, that

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etiam artifex applicat securim ad scindendum, qui tamen interdum formam securi non tribuit; sed etiam dat formam creaturis agentibus, et eas tenet in esse.”— “Third, it must be considered that God moves not only things to action, as having applied the forms and powers of things in act, as so also the craftsman applies the axe to cutting, who nevertheless has not at sometimes given the form to the axe, but God also give form to created agents, and He preserves them in existence (in esse).”

<sup>80</sup> 1266–68: *ST Ia*, q.105, a.5, c.: “Sic igitur secundum haec tria Deus in quolibet operante operatur.”— “In this manner, therefore, according to these three [active natural lines of causation] God acts in every acting cause.”

<sup>81</sup> 1266–68: *ST Ia*, q.105, a.5, ad.1: “Ad primum ergo dicendum quod Deus sufficienter operatur in rebus ad modum primi agentis, nec propter hoc superfluit operatio secundorum agentium.”— “To the first objection, it must be said that God acts sufficiently in things according to [His] mode as primary agent, but the action of secondary agents is not superfluous on account of this fact.”

<sup>82</sup> 1266–68: *ST Ia*, q.105, a.5, ad.2: “Ad secundum dicendum quod una actio non procedit a duobus agentibus unius ordinis, sed nihil prohibet quin una et eadem actio procedat a primo et secundo agente.”— “To the second objection, it must be said that one action does not proceed from two agent causes in the same order, but nothing prevents that one and the same action proceed from a primary and a secondary agent.”

while natural cause is ordered to its specific natural effect, God's primary causality is ordered to all causes and effects in the order of *esse*. To consider God's direct creation as a substitute for secondary causes is to detract from the power of God and to violate his omnipotence. God is so powerful that he is able, not only to produce natural effects without their natural causes, but to produce them as naturally produced by their natural causes.

## 5. An Extension of Thomas' Critiques of Occasionalism from Omnipotence

Thomas' arguments against occasionalism from the reality of natural causation and the purposefulness of created being can be further developed to more thoroughly demonstrate the incompatibility of occasionalism with divine omnipotence. Here I will extend Thomas' basic arguments in order to show the epistemological incompatibility of occasionalism with the doctrines of omnipotence and creation—our belief in “God the father almighty, creator of heaven and earth.”<sup>83</sup>

The occasionalist denial of necessary connection and natural secondary causes is not compatible with belief in the doctrines of omnipotence and creation. For the theist, God's act of creation means that He causes the world and all that is in it to be from nothing. Theism identifies God as the creator through revelation and through the kind of Aristotelian philosophical reflection on nature outlined above. Both means of identifying God as the creator presuppose that the theist has empirical and epistemic access to natural forms of being. Of course, without a basic experience and knowledge of the world and the many forms of being that inhabit it, the revelation that God is the creator would be totally meaningless. Further, if the contingency of the natural world could not be apprehended through knowledge of the causal capacities of natural beings, neither could it be shown that the existence of such natural forms necessitates a purely actual cause, who is His own existence.

At a minimum, the judgment that a natural being *exists* requires that the being apprehended possess the formal power to make itself known in the way that it comes to be known. Natural form, then, is known through the apprehension of

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<sup>83</sup> In 2010: *A Thomistic Critique of Occasionalism From Natural Causality, Divine Omnipotence, And the Psychology of Human Agency*, I also show the inadequacy of occasionalism with respect to the theistic understanding of creation in terms of ontological participation.

its effects. The osprey gliding toward the water surface of the lake, for example, affects my sense apparatus in such a manner that I know that it is in the way that it is. It is composed of materials capable of reflecting the light of the sun so that I see its color and shape: dark brown wings with whitish breast flecked symmetrically with a brown diamond-like pattern, and a head with white and a stripe of dark brown running from beak, through the eyes down the neck; pointed wings, and the talons and curved beak of predatory bird. By hollow bones and feathered wings it flies; by its own eyes capable of taking in the color the shape, it perceives the trout and is attracted to it, estimates its depth and, by its talons plunges to break surface tension and grasp the trout, living in fulfillment of the end of its material and formal existence. As it achieves its perfection, I am aware of how it is causally capable of such a task, while the duck that swims nearby, with its flat beak, webbed feet, broad wings, etc., is not.<sup>84</sup> This judgment of the osprey as cause, cutting air, water, and the flesh of fish, to obtain its nourishment (effect) is no fictitious contrivance of the imagination. I cannot negate it, divide it, or augment it via imagination. It is given by sense-perception, and I judge it by priorly formed conceptual universals or intentions that are in themselves un-intelligible except as meanings, significations, signs, and referings to what exists in the world separately from my subjective awareness.<sup>85</sup> As far as my knowledge and experience are concerned, that the

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<sup>84</sup> Those who doubt the causal power of God’s most wonderful creation would do well to spend less time engulfed in abstruse mathematical models aimed at describing imperceptible matter and more time living, acting in, and perfecting their own causal powers of sense-perception and intellect in contemplating the immediate phenomena of nature.

<sup>85</sup> By unintelligible, I mean that denying that such conceptions refer to what is real in the world entails a contradiction. 1266–68: *ST* Ia, q.85, a.2, s.c.: “Sed species sensibilis non est illud quod sentitur, sed magis id quo sensus sentit. Ergo, species intelligibilis non est quod intelligitur actu, sed id quo intelligit intellectus.”— “But the species of the perceived is not that which is perceived, but rather that by which the perceiver perceives. Therefore, the intelligible species is not actually what is known in an act of knowing, but it is that by which the intellect understands.” Again, see Husserl 1913: *Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy* I, §43. Husserl likewise holds that “picture consciousness” or “sign consciousness,” which is the awareness of our conceptions our universals themselves, is not what it means to perceive a physical object, and to hold as much contradicts the very sense of perception. Cf. Wagner 2021: “On the Foundational Compatibility of Phenomenology & Thomism”. Karol Wojtyła also expressed well how idealism or phenomenism contradicts the very meaning of sense-perception as it is given in experience. See the second part of my two-part study, 2021:

osprey *is* cannot be divorced from the fact that it is *what* it is—that it has the morphological and other characteristics that I observe it to have—and that it is capable of acting purposefully through its essence. The denial that natural beings produce their own proper effects would entail a denial that natural beings can present themselves as the kinds of things that they are in connection with their activities. If natural beings lack the causal capacity to present themselves, then it is also the case that there can be no experience or knowledge of their existence. The epistemological nature of the apprehension of natural beings presupposes the ontological reality that natural beings are causally productive. To deny the existence of natural causes, therefore, is to deny that there are hylomorphic beings that can be empirically and intellectually apprehended. In turn, this means that there could not be knowledge *that things are*, since there would be nothing knowable by causal presentation. But then the question becomes, if there are no natural beings capable of making themselves known to us as knowers, as the occasionalist must hold, what is it that God has created? The fundamental problem for the occasionalist is that any answer to this question that affirms God as the creator presupposes a realist conception of natural being—no matter how impoverished this conception may be. This is because even apprehending that something exists necessitates some real causal powers in the thing to make itself manifest. Apprehending that something exists necessitates that the thing apprehended possess the formal operative power to present itself as it is having the effect of coming to be known in my intellect.

Moreover, as I observe the osprey, I also reason that, as a hylomorphic being, contingent on prior natural causes for its existence, which are in turn contingent on prior natural causes for their existence, and as there cannot be an infinite regress in the explanation of such prior natural beings' existence—lest the contradiction follow that this osprey here and now not be—it is necessary that there exist a radically transcendent Creator who has already revealed Himself to us as Existence itself (*esse ipsum*) without qualification, saying to Moses “I Am Existing,”<sup>86</sup> and that that this same God remains immediately causally responsible for the existence of the osprey and all other natural-bodily beings. I

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“On Karol Wojtyła’s Aristotelian Method Aristotelian Induction (ἐπαγωγή) and Division (διαίρεσις)” and 2022: “On Karol Wojtyła’s Aristotelian Method: Induction and Reduction as Aristotelian Induction (ἐπαγωγή) and Division (διαίρεσις)”.

<sup>86</sup> See Exodus 3:14 (Septuaginta): “καὶ εἶπεν ὁ θεὸς πρὸς Μωϋσῆν Ἐγὼ εἰμι ὁ ὢν.” — “And God said to Moses: I am Being.” Or, the Vulgate: Ego Sum Qui Sum

am aware all at once in this moment by such judgment and reasoning that a complete and adequate account of the natural phenomena requires St. Thomas Aquinas' distinction between primary and secondary cause. I know the osprey as the natural agent of its action and I know God as the primary cause of its existence. To know God as the omnipotent creator, I must already know nature as having its own causal integrity and yet as being contingent. And, to maintain my judgment that God exists without qualification—that God transcends mutable nature—I must also avoid conflating God's divine action with natural, motive agency for, if God was assumed to be natural motion then God too would require a prior cause of existence—a manifest contradiction.

Al-Ghazali's own (along with the others') description of the phenomena betrays the reality that the epistemic apprehension of existents presupposes some type of inherent secondary causal powers. While the occasionalist needs created existents to be causally inert, he cannot assent to there being created existents if they are totally causally inert. *Prima facie*, we might be able to say that God alone is the cause of the heat in the fire and we might be able to deny that the fire is the cause of the cotton burning. Yet, if we go on to attribute the other properties of fire—that it rises in tongues, has such and such coloration, gives off light, etc.—to God, there will be nothing left to call fire and nothing to indicate its existence to an observer. It is clear, then, that without appealing to some causal properties, fire cannot be known to exist as other from God. Kathrin Rogers nicely articulates this point, discussing the problems that occasionalism poses for the possible existence of any objects whatsoever:<sup>87</sup>

God could bring something into being *ex nihilo*, a warm rock let's say, which did not exist a moment before. But...in order for this thing to truly be a rock it must exist with causal powers. God cannot make a rock which does not possess any rock-like causal properties, and so there is a sense in which He "needs" secondary causes if He wants to create a world of objects external to the perceiving mind—the logical sense in which God cannot make a rock which is simultaneously not a rock.

If it is impossible that created things lack causal powers even as mere appearances or existents, then it follows that the occasionalist claim that created things lack causal powers amounts to the claim that God did not create anything. Existence can only be predicated of those things that are perceived and epistemically apprehended as a result of their inherent causal powers. To the

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<sup>87</sup> Rogers 2001: "What's Wrong with Occasionalism?" 361.

extent that occasionalism denies that there are real causal powers in creation, therefore, occasionalism is committed to a denial of created being and creator. Theists must reject occasionalism, thus, in order to give intellectual assent to the first line of our creed: *Credo in Deum Patrem omnipotentem, Creatorem caeli et terrae*.

In an attempt to escape this conclusion, the occasionalist may argue that objects of perception do not have an objective reality independent of the perceiver's own mind. The claim would then be that God creates causally inert impressions in the mind of the agent. In such a case, the answer to the question "What does God create?" would be "a world of mental impressions." Thus, creation by an omnipotent God can be maintained along with the denial of secondary cause.

Analysis of an occasionalist reduction to pure mental immanence of this sort, however, reveals that an appeal to secondary cause is still requisite. Indeed, secondary cause is necessary to account for both a subjective perceiver and for the existence and nature of the perceived, albeit immanent, object. Using an *ἐποχή* (*epoche*), I suspend judgement<sup>88</sup> as to whether all that exists extramentally or merely immanently within my own mind. I nonetheless experience both myself and the objects of perception as possessing formal causal powers. My experience of myself as a subject shows that I must at least possess the causal capacity to perceive myself and the impressions that God causes in my world. The notion of a causally inert perceiver is a contradiction in terms. Further, to identify and predicate existence of the objects that I perceive presupposes that I at least have the causal capacity to perform these actions. In fact, I experience myself as exercising just this kind of perceptive and intellectual power—very often. With respect to objects of experience, I find that it is necessary that such objects possess the causal capacity to present themselves to me as they are. At the epistemic level, even to say that some immanent impression exists, I must be able to appeal to the formal characteristics with which it presents itself to me as a perceiver. Even granting the possibility that the perceived osprey lacks an objective reality outside of my mind, I must appeal to its perceived matter, form, agency, and purposiveness to judge that the osprey exists as an object of

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<sup>88</sup> The argument being offered here draws heavily on Edmund Husserl's conception of the *ἐποχή/epoche* or the phenomenological-reduction. See Husserl 1907: *The Idea of Phenomenology*; and Husserl 1913: *Ideas Pertaining to a Pure Phenomenology and a Phenomenological Philosophy* I, §43. For an excellent exposition of Husserl's phenomenological-reduction, see Sokolowski 2000: *Introduction to Phenomenology*.

perception. Moreover, appeal to such causation is that by which I am able to distinguish objects of perception from myself as a perceiving subject. They are also that by which I can distinguish one perception from another. I am able both to understand that I have a kind of independence from the objects that I perceive and that they have independence from one another. Both my experience of myself as conscious perceiver and my experience of perceived objects presuppose that I have epistemic access to causal powers in these ways. Relegating God's creation to the immanent contents of the mind is not sufficient for denying secondary causation. Even assuming the possibility of pure mental immanence, it is still the case that theists must acknowledge secondary causes to attribute existence to created objects and the omnipotent act of creation to God. If created objects cannot present themselves to the senses through their own causal powers, then there will be nothing to say that God has created and it will be impossible to claim that God is a creator. Further, the occasionalist cannot claim that such formal powers of presentation just are God himself without violating the doctrines of divine immutability, transcendence, and other divine predicates.

Reducing reality to immanent mental states remains a problem for thinkers such as Al-Ghazali because it does not eliminate the need for secondary causes. Making such a move, therefore, still involves the occasionalist in the denial of creation and divine omnipotence. Moreover, a God who creates a world of external objects known by human perceivers is more powerful than a God who limits his creation to directly causing impressions in human minds.

This epistemological critique makes it clear that occasionalism is empirically and epistemologically false. Beyond the epistemological necessity of secondary cause for predicating existence of creation, it is also the case that God's creation must have causal capacities in order that it might be distinguished from other forms of existence and from God himself.<sup>89</sup> If occasionalists are correct in their claim that there are no secondary causes, then it should be impossible to distinguish one created being from another and created being in general from God. Humans are actually able, however, through observation and analysis to distinguish between different kinds of created or natural being and to distinguish creation from the

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<sup>89</sup> For the theist, it is essential that we have the capacity to distinguish God from his creation. Natural substance is mutable. Theism upholds that God is immutable. If some natural cause, like fire, were said to be God, then God would have to be a mutable cause. This is impossible.

absolutely necessary principle (God) that is the primary cause of its being. We do this primarily by appeal to the natural causal capacities of the beings to which we have empirical access.

## 6. Conclusion

Contributing to the Augustinian tradition of giving a philosophical account of creation *ex nihilo*, St. Thomas Aquinas first clearly expressed the full compatibility of natural causation, divine omnipotence, and conservation by appeal to two distinct orders of causation: primary (divine) and secondary (natural). Both orders of causation are present in and necessary for explanation of natural agents and effects. Moreover, and while upholding divine immanence and providence, Thomas showed that the occasionalist doctrine denying secondary causes is actually incompatible with the doctrine of divine omnipotence, since the power of the cause is demonstrated through the power of the effect. In this paper, I have extended the Angelic Doctor's critique of the occasionalist view, showing that occasionalism is epistemologically incompatible with the theistic belief that God is the omnipotent creator of heaven and earth. To be consistent, occasionalists must hold that perceivers and perceived objects are actually devoid of causal powers. However, this would make it impossible for one as a perceiver to judge that things exist in the world and, consequently, to judge that God created these things. Further, it would make it impossible for things in the world to manifest themselves to one as distinct from God (they would, simply, have to be God). Again, if this were the case, one would not be able to judge that God is the creator of such 'things,' distinct from them as their immutable, omnipotent, and transcendent cause. The account given here should provide a significant rebuttal and warning to contemporary theists who have been driven (apparently) into an occasionalist metaphysics through a Humean and reductionistic approach to natural philosophy. Upholding the distinction between God as primary cause in the order of existence (*esse*) and the fourfold account of natural, secondary causation, is necessary—as one of *preambula fidei*—for faith as rational assent to the first line of the Christian creed: *Credo in Deum Patrem omnipotentem, Creatorem caeli et terrae*.

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# Thomas Aquinas on Instrumental Creation, the Cosmogonical Fallacy, and the Intelligibility of Nature

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In the second book of his commentary on Peter Lombard's *Sententiae*, Thomas Aquinas considers three opinions regarding the creation of the material universe through intermediaries. The first is the opinion of the Neoplatonic emanationists of the School of Baghdad who held that God created the material world through the creative power of intermediate intelligences. The second position is that of the Parisian masters of theology who denied Islamic emanationism on the grounds that the infinite power required by creation *ex nihilo* cannot be communicated to a creature. The final opinion is that of the Lombard himself who denied the actual communication of creative power to intermediaries, but considered it philosophically possible. While Thomas is in full agreement with the Parisian masters in their complete rejection of emanationism, he nonetheless here expresses sympathy for Lombard's position on the philosophical, if not doctrinal, possibility of God's creation of the world through instruments.<sup>1</sup>

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<sup>1</sup> c.1252/56: *In Sent.*, lib.2, d.1, q.1, a.3, c.: "Utraque autem harum ultimarum opinionum [doctorum Parisiensium et Magistri Lombardi] videtur habere aliquid cui innitatur."

Later in his career, however, Thomas changed his mind on this point and denied the philosophical possibility of any use of instruments in the divine act of creation. He came to understand creation through intermediaries as contrary, not only to the faith, but to reason as well. In *Summa contra Gentiles* II and again in *Summa theologica* Ia, q. 45, Thomas develops a philosophical argument against the Lombardian position based on an analysis of the nature of instrumentality. Considered as extensions of the *Sententiae* text, these later texts, along with question 3 of the *De potentia Dei*, are generally taken to represent Thomas' mature thoughts on the nature of creation.<sup>2</sup> Yet, in the preface of his hexaemeron account in the *Summa theologica*,<sup>3</sup> Thomas sets out an argument against instrumental creation that does not directly appeal to an analysis of instrumentality, focusing instead on issues concerning the creation of material being as such. The nature of God's agency and its incompatibility with acting through instruments retains its importance in a proper understanding of creation *ex nihilo*, but these considerations are now linked with the intelligibility of the material world. This association of a correct account of creation and divine agency with scientific knowledge of nature represents a significant aspect of Thomas' later thought on creation.

In all of his discussions of creation, from the Sentences commentary onwards, Thomas' overarching concern is with correcting what might be called "the Cosmogonical Fallacy,"<sup>4</sup> the notion that creation is some sort of passage from potentiality to actuality or that creation involves something presupposed—essentially the error committed by the Islamic emanationists. The identification and correction of this error stands as a major contribution to the philosophical understanding of creation *ex nihilo* as well as a foundation for a theistic account

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<sup>2</sup> On the development of Thomas' views on instrumental creation see Weisheipl 1974: *Friar Thomas d'Aquino: His Life, Thought, and Works*, 132–33, 200–12; Torrell 1993: *Saint Thomas Aquinas: The Person and His Work*, vol. I: 161–64; Pearson 1991: "Creation Through Instruments in Thomas' Sentence Commentary": 147–60 as well as and Carroll 1997: *Aquinas on Creation*, especially 46–53.

<sup>3</sup> 1266–68: *ST* Ia, q.65, a.3–4.

<sup>4</sup> Most of Thomas' references to this fallacy occur in discussions of the proper understanding of creation *ex nihilo*. Thus, he does not identify the error with a specific name as is done here. That he nonetheless considers it a specifically identifiable and reoccurring error is clear from those occasional texts focusing on the fallacy itself. See, for example 1259/65: *SCG*, lib.2, c.17.

of divine agency. While it is certainly true that Thomas' instrumentality argument is directed against this fallacy, it is notable that Thomas also holds that this fallacious notion of creation is incompatible with Aristotelian natural philosophy. Clearing away the Cosmogonical Fallacy is, for Thomas, not only a means of coming to understand creation aright but is also necessary for ensuring the intelligibility of the material universe and the possibility of a natural science. The task of this study, then, is to set out Thomas' argument against instrumental or angelic creation from the hexaemeron text of his *Summa theologica*, indicating its implications for the intelligibility of natural being. As will be seen, this argument supports the view that Thomas' rejection of the Cosmogonical Fallacy was not only aimed at providing a proper understanding of the traditional doctrine of creation *ex nihilo*, but at doing so in a way supportive of Aristotelian natural philosophy as well.<sup>5</sup>

## I. The Cosmogonical Fallacy

A frequent and philosophically significant theme in the writings of Thomas Aquinas is the intelligibility of the theistic notion of creation. As early as his commentary on the Sentences,<sup>6</sup> Thomas unequivocally claims that reason not only demonstrates the fact of creation (*an sit*), but also what creation is (*quid sit*) and what distinctive properties belong to it (*an sit talis*). Moreover, this insistence on the intelligibility of creation remains a consistent theme throughout his writings, as indicated by the later treatments in the *Summa contra Gentiles*, the *Quaestiones disputatae de potentia Dei*, and *Summa theologica*. The context of all of these discussions is Thomas' opposition to an erroneous notion of creation at the foundation of Islamic emanationism. The confrontation of this error, the Cosmogonical Fallacy, provides the occasion for Thomas' investigation into the nature and reality of creation.

Concerned to avoid any introduction of plurality into the absolute first cause of the universe, the emanationists argued for creation through a hierarchy of

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<sup>5</sup> Defense of this thesis lends oblique support to recent efforts aimed at showing that Thomas' rejection of the Cosmogonical Fallacy is relevant to the proper understanding of modern science. See, for example, Carroll 1988: "Big Bang Cosmology, Quantum Tunneling from Nothing and Creation" and 2000: "Creation, Evolution, and Thomas Aquinas".

<sup>6</sup> c.1252/56: *In Sent.*, lib.2, d.1, q.1, a.2, c. For a very useful discussion of this text see Baldner and Carroll, *Aquinas on Creation*, 41–46.

intelligences. The first cause can only produce the first effect, otherwise a causal diversity would be attributed to the first cause that is incompatible with its absolute unity. The diversity of creation, therefore, has its origins in the plurality of instruments of creation that, receiving creative power from the first cause, exercise their diverse powers in the creation of others. The divine act of creation proceeds in atemporal stages such that the first created intelligence is produced directly by God, and this intelligence produces the next, and so on until the beings of the material world are produced.

Attributing this understanding of creation to Avicenna and the author of the *Liber de causis*,<sup>7</sup> Thomas finds the source of this heretical view in the mistaken notion of creation as a kind of change (*mutationis*) or becoming (*fieri*). In contrast, Thomas points out, God’s creation is said to be *ex nihilo* in two ways. First, creation presupposes nothing in the created thing. God’s creative agency does not require any pre-existing material stuff nor a pre-existing potentiality of any kind. The attempt to explain creation as the passage from a pre-existing potentiality to the actual production of a new thing confuses natural change with God’s unique act of creation.<sup>8</sup> Second, creation is *ex nihilo* because non-being is logically prior to the being of the created thing. Without God’s creative agency, the creature does not exist and is, therefore, wholly dependent on God. Creation is, then, a real relation of the created thing to its creator, but not of the creator to the created thing. This relation is grounded in God’s efficient agency alone which rules out any relatedness on the part of God toward the creature, while preserving the relation of total dependency of the creature on God. To hold that God is really related to his creation is to confuse natural relations, which are accidental, with the unique relation of absolute dependence of the creature on God, which implies nothing accidental in God.<sup>9</sup>

This fallacious conflation of natural change and creation *ex nihilo* certainly underlies emanationism. Were God to have created the material world through the agency of intermediate intelligences to whom God communicates his creative power, then the creative act of the instrumental agent would not be truly *ex nihilo* for it would depend on the pre-existent potentiality placed in the

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<sup>7</sup> c.1252/56: *In Sent.*, lib.2, d.1, q.1, a.2, ad.1; *ibid*, d.1, q.1, a.3, c; 1265–66: *De pot.*, q.3, a.4, c; 1266–68: *ST Ia*, q.45, a.5, c; *ibid*, q.65, a.4, c.

<sup>8</sup> c.1252/56: *In Sent.*, lib.2, d.1, q.1, a.2, ad.1 and ad.2.

<sup>9</sup> c.1252/56: *In Sent.*, lib.2, d.1, q.1, a.2, ad.4 and ad.5.

intermediate agent by God. Moreover, were God to have used such instruments in creating, he would be accidentally related to them as they proceed in their agency from potential creator to actual creator. God would therefore be the potential creator of the material world insofar as his creation of the material world would be dependent upon the exercise of the act of creation on the part of the created intermediate intelligence.

Thus, in his discussion of angelic creation, Thomas explicitly accuses the emanationists of the Cosmogonical Fallacy. Noting that some philosophers have held that created things proceed from God in stages, Thomas strongly contrasts this with the teaching that the material world is created *ex nihilo* on the grounds that the fundamental production of material creatures results from the act of creation whereby matter itself is produced.<sup>10</sup> His point is that God's act of creation by which material creatures in their hylomorphic composition are brought into existence is not the imposition of form upon available matter. Divine creation is not a kind of development or process because in any process the incompletely developed state is prior to full development.<sup>11</sup> Yet, argues Thomas, developmental creation is not creation in the relevant sense for:<sup>12</sup>

[divine] creation is the production of something in the whole of its substance presupposing nothing that is uncreated or created by another. It cannot be admitted, then, that anything is able to create except God alone who is the first cause.

The emanationists, therefore, hold their erroneous view of the origins of the universe because they misunderstand the nature of creation—that is, they commit the Cosmogonical Fallacy.

Thomas associates the emanationists with the Cosmogonical Fallacy in another way as well. In cataloguing the various ways in which the philosophers have

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<sup>10</sup> 1266–68: *ST* Ia, q.65, a.3, c.: “Dicendum quod quidam posuerunt gradatim res a Deo processisse, ita scilicet quod ab eo immediate processit prima creatura, et illa produxit aliam; et sic inde usque ad creaturam corpoream. Sed haec positio est impossibilis. Quia prima corporalis creaturae productio est per creationem, per quam etiam ipsa materia producitur.”

<sup>11</sup> *Ibid*: “. . . imperfectum enim est prius quam perfectum in fieri.”

<sup>12</sup> *Ibid*: “Creatio [divina] autem est productio alicujus rei secundum suam totam substantiam, nullo praesupposito quod sit vel increatum vel ab aliquo creatum. Unde relinquitur quod nihil potest aliquid creare nisi solus Deus, qui est prima causa.”

proposed that bodily forms derive from spiritual substances, Thomas mentions Plato of the *Timaeus* and the Manichean Albigensians along with Avicenna and the other Baghdad emanationists.<sup>13</sup> Despite the differences among these views, they all, he claims, have a common root. It is the error of supposing that, when something is generated, it is a new form that comes into being. Referring to Aristotle, however, Thomas reminds the reader that it is not so much a new form that comes into being, but the hylomorphic composite. By focusing on the emergence of the new form alone, the philosophers were misled into overlooking the necessity of the presence of potentiality for form.<sup>14</sup> As a result, the emanationists consider the initial production of material forms in a way that is cosmogonically fallacious, for, as Thomas points out,<sup>15</sup>

the initial production of bodily creatures is not considered a transition from potentiality to actuality. For this reason, the bodily forms that came to be possessed by bodies in their initial production are immediately produced by God.

## 2. The Instrumentality Argument

While the argument offered by the Parisian masters against the emanationists was the infinite power argument, the primary objection offered by Thomas in his later works was based on an analysis of instrumentality. The masters of theology had argued that no finite cause could take part in the production of an infinite effect, because an effect must be proportionate to its cause. Yet, the type of causality involved in creation *ex nihilo*, wherein being is brought forth from absolute non-being is, as it were, the bridging of an infinite gap. Such infinite causal power cannot be exercised by a finite being. Thus, creation *ex nihilo* cannot be accomplished through created, and hence finite, instruments.<sup>16</sup>

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<sup>13</sup> *Ibid*, a.4, c. and ad.2.

<sup>14</sup> At 1270/71: *In Meta.*, lib.7, lec.7, n.1426–1431 (Marietti), Thomas associates this error with Platonism generally.

<sup>15</sup> 1266–68: *ST Ia*, q.65, a.4, c.: “In prima autem corporalis creaturae productione non consideratur aliqua transmutatio de potentia in actum. Et ideo formae corporales quas in prima productione corpora habuerunt, sunt immediate a Deo productae...”

<sup>16</sup> c.1252/56: *In Sent.*, lib.2, d.1, q.1, a.2, ad.4 and ad.5 where Thomas reports this argument, referring to it as the *communis opinio*. For a discussion of this text, see Pearson 1991: “Creation Through Instruments in Thomas’ Sentence Commentary”, 151–53 who

Thomas does indeed present this common argument in his later works,<sup>17</sup> but he relies primarily on the instrumentality argument. The very nature of an instrument shows the impossibility of creation through intermediaries. The power of an instrumental cause is necessarily connected with the power the instrument possesses as the sort of being it is. Thus, while an instrument only acts instrumentally when moved by the higher cause of which it is the instrument, its effect can only be achieved through its own natural causal power. It is this natural causal power of the instrument, of course, that is being employed by the higher cause in moving the instrument to bring about the effect. When something is accomplished through the use of an instrument, therefore, there is a proportional relation, not only between the operation of the higher cause and its instrument, but also between the natural causal power of the instrument and its instrumental power to bring about the effect. Indeed, if the instrument cannot act in the way natural to it, then it cannot act instrumentally. Created instruments, however, naturally act by bringing potentiality into actuality. Yet, creation *ex nihilo* does not involve the actualization of *any* potentiality, for there is nothing in which potentiality can reside. It follows that creation *ex nihilo* can never be through instruments.<sup>18</sup>

In the *Summa contra Gentiles*, Thomas makes this argument the centerpiece of his absolute rejection of the philosophical possibility of creation through instruments, marking the shift from his earlier position in the commentary on Lombard's *Sententiae*. Arguing that every instrumental agent carries out the action of the principle agent only through "action proper and connatural" to the instrument, Thomas shows that such proper action is necessary to the operation of any created instrument. He confirms this by the example of the digestion of food in animals. Food is the principle agent in the production of flesh, but it brings about its production through the instrumental agency of digestion. Were digestion not by nature a process of dissolving and dividing, it could never serve as the agency through which flesh was produced in the process of growth. This natural agency of the digestive process is prior to the action of the principle agent

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suggests that Thomas was somewhat distancing himself from the views of the Parisian masters.

<sup>17</sup> For example, 1266–68: *ST* Ia, q.45, a.5, ad.3; q.65, a.3, ad.3; 1259/65: *SCG*, lib.2, c.20, n.5; 1265–65: *De pot.*, q.3, a.4, ad.2 and ad.15.

<sup>18</sup> This is essentially the argument of 1259/65: *SCG*, lib.2, c.21, n.5–7 and 1266–68: *ST* Ia, q.45, a.5. See also 1265–66: *De pot.*, q.3, a.4, c.

and is thereby available to the principle for use. Thomas contrasts this to creation *ex nihilo* where there is nothing presupposed, because nothing can be prior to the production of being.<sup>19</sup> To conflate, then, natural production through an instrument and the sort of production that is creation *ex nihilo* is to commit the Cosmogonical Fallacy.

At *Summa theologica* Ia, q. 45, a. 5, Thomas provides a similar example from nature. A material medium, such as air, instrumentally conducts the heat produced by the principle agent, fire, to heat up something. Air does this by means of a power it naturally has to conduct heat and, therefore, this power is prior to the effect of the heated-up thing—that is, the hot effect is dependent upon the natural heat-conducting capacity of air which air must possess independently of both the primary cause and the effect. Thomas immediately adds that Avicenna, with his creation through separated intelligences, and Peter Lombard, with his claim of the philosophical possibility of creation through intermediaries, were considering instrumentality in just this way. Both, however, have overlooked the incompatibility of this necessary feature of instrumental agency with creation *ex nihilo*, thereby committing the Cosmogonical Fallacy.

Thomas proceeds in the same text to elaborate on the nature of this error, providing his well-known example of an artifact. The principle agent of the wooden stool is the carpenter who makes use of the instrumental agency of the saw to cut the wood in such a way that it can be pieced together as a stool. The saw can be used this way, of course, because of its sharp, toothed form which it possesses in virtue of being a saw—that is, in virtue of being the tool it is. Indeed, were not the saw formed like this, it would not be *this* instrument nor would it be useful for *that* task. Thomas puts it like this: “were [it] not to act according to what is proper to it in itself, it would be employed [by the principle agent] to produce the effect in vain” and the instrument would “not be properly determined to the determined effects.”<sup>20</sup> The effect of the principle agent in creation, God the creator, is being absolutely considered. No instrument can produce this because there is absolutely nothing which is prior to or independent of the creation of being aside from God the principle agent himself. Thus, to hold

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<sup>19</sup> 1259/65: *SCG*, lib.2, c.21, n.7.

<sup>20</sup> 1266–68: *ST* Ia, q.45, a.5, c.: “Si igitur nihil ibi ageret secundum illud quod est sibi proprium, frustra adhiberetur ad agendum: nec oporteret esse determinata instrumenta determinatarum actionum.”

that God used instruments in creating *ex nihilo*, whether they be separated intelligences or bodily agents, contradicts the meaning of creation.

### 3. Instrumental Creation and the Principles of Nature

In the preface of the *Summa theologica* version of his hexaameron, Thomas makes use of a rather different argument to show the impossibility of creation through instruments. Addressing the issue of angelic creation in q. 65, Thomas begins with the claims of Avicenna and the other Islamic emanationists.<sup>21</sup> He rejects their view that creatures proceed from God in a series of ontologically descending stages finally resulting in the creation of the material universe. He then remarks that their account is impossible because the creation of the material world requires the creation of matter itself.<sup>22</sup> In support of this he mentions the principle that the undeveloped state is prior to the developed state in the process of generation (*imperfectum enim est prius quam perfectum in fieri*). Yet, the higher intelligences of the emanationists from which the material world is supposedly generated are more perfect than material being, not less. For there to be any sort of generation at all, there must be a more basic and less perfect substrate with respect to which generational development proceeds. Consequently, the existence of the material universe is not the result of a generation of the less perfect from the more perfect. Rather, it is the result of a cause that creates being and imparts to being a potentiality for further perfection of being. Only God can create in this way, for only God can create *ex nihilo*—that is, making something exist without perfecting any less perfect substrate.

Presenting an argument in support of this, Thomas begins by reminding the reader that the higher or more fundamental the cause, the more things that are effected by its causality. Any substrate is necessarily more universal and fundamental than what determines or specifies it. Thus, for example, existence is broader than life and life is broader than intellect. The more a production is a substrate, the more directly its production by a higher or more fundamental cause. So, Thomas says, with matter and form. Considering the creation of the material world, the most fundamental substrate is matter and, therefore, this must be produced by a cause that is more fundamental than or, in Thomas' terms "superior to," any developmental cause of the various specified forms found in

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<sup>21</sup> 1266–68: *ST* Ia, q.65, a.3, c. ab initium.

<sup>22</sup> 1266–68: *ST* Ia, q.65, a.3, c.: "Quia prima corporalis creaturae productio est per creationem, per quam etiam ipsa materia producitur."

the material universe. Thomas then reminds the reader of two points: first, no instrumental cause can produce anything except insofar as something produced by a higher cause is presupposed in the thing produced; second, creation is the production of anything in the totality of its substance without anything presupposed. He then draws the conclusion that the material universe cannot have been created through angelic instruments.<sup>23</sup>

The principles of Aristotelian natural philosophy stand behind this argument. The intelligibility of the material universe depends upon the possibility of explaining generation. This, as Thomas indicates, is accomplished by demonstrating the way in which an imperfect substrate is perfected through a process of formal specification. Explanation in the sciences of nature, therefore, always requires an underlying material substrate that is available for formal development. This requirement belongs to the very nature of generation, the subject of scientific explanation. Indeed, the material world is intelligible precisely insofar as it is possible to provide a formal specification of an underlying material substrate accomplished through the agency of some cause.

Were the emanationists correct that the material world came into existence through the agency of higher intelligences, then the material universe would not, in itself, be intelligible. Explanation of the generation of material substances would be in terms of those more perfect beings responsible for material production. Indeed, in the following article, Thomas notes that this is precisely what the emanationists maintained, for they argued that the forms of material things do not subsist separately, but only in higher immaterial intelligences. It is these immaterial intelligences, or angels, that are the ministerial or instrumental creators used by God to create the material world.<sup>24</sup> They are able to create because God has imparted to them the capacity to know the corporeal forms that they thereby generate. Thomas clearly has in mind here thinkers such as Avicenna who held that the forms found in the material universe have their origin

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<sup>23</sup> 1266–68: *ST Ia*, q.65, a.3, c.: “Quanto ergo aliquid est magis substratum, tanto a superiori causa directe procedit. Id ergo quod est primo substratum in omnibus, proprie pertinet ad causalitatem supremæ causæ. Nulla igitur secunda causa potest aliquid producere, non præsupposito in re producta aliquo quod causatur a superiori causa. Creatio autem est productio alicujus rei secundum suam totam substantiam, nullo præsupposito quod sit vel increatum vel ab aliquo creatum. Unde relinquitur quod nihil potest aliquid creare nisi solus Deus, qui est prima causa.”

<sup>24</sup> 1266–68: *ST Ia*, q.65, a.4: “Utrum formæ corporum sint ab angelis.”

in the intelligible forms constituting the thoughts of angels as the forms of artificial things are produced from the forms in the mind of the artificer.<sup>25</sup>

It has already been noted that Thomas holds that emanationism is grounded in the error of regarding material generation as the generation of a form, rather than the generation of the hylomorphic composit of matter and form. Thomas briefly elaborates on this Aristotelian principle noting that any generation or corruption of material things is a generation or corruption of things possessing both matter and form as causes of their being. Like produces like and, therefore, an immaterial form is not the explanation of a bodily form, but a hylomorphic composit brings another such composit into being, as when one fire is ignited by another. Consequently, the bodily forms found in the material world are not generated by an influx from some immaterial form, but by matter being reduced from potency to act by an agent that is itself composed of matter and form.<sup>26</sup> Yet, this can only happen if matter is available for formal actualization. Ultimately, matter must be available for the formal specifications that constitute the material world. This availability of matter, this fundamental potentiality for anything to exist, cannot be the result of a process whereby potency is reduced to act. Rather, it must be the direct imparting of being to material things with their bodily forms specifically actualizing material potentialities. This, Thomas insists, can only be done by God “to whose command alone matter submits.”<sup>27</sup>

#### 4. Conclusion

Early in his career, when he wrote his commentary on the Lombard’s *Sententiae*, Thomas disagreed with the common opinion of the Parisian masters that creation through instruments is philosophically impossible. Rather, he agreed with Peter Lombard that, while instrumental creation is doctrinally false, it is philosophically plausible. Later Thomas came to reverse his position on the basis of a sophisticated analysis of instrumentality. Thus, in his later treatments of the

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<sup>25</sup> 1266–68: *ST Ia*, q.65, a.4, c.: “...sicut a formis quae sunt in mente arificis, procedunt formae artificiatorum.” See also ad.2 of the same article.

<sup>26</sup> 1266–68: *ST Ia*, q.65, a.4, c.: “Sic igitur formae corporales causantur, non quasi influxae ab aliqua immateriali forma, sed quasi materia reducta de potentia in actum ab aliquo agente composito.”

<sup>27</sup> 1266–68: *ST Ia*, q.65, a.4, c.: “Et ideo formae corporales quas in prima productione corpora habuerunt, sunt immediate a Deo productae, cui soli ad nutum obedit materia, tanquam propriae causae.”

*Summa contra Gentiles*, the *Quaestiones disputatae de potentia Dei*, and *Summa theologica* he makes it clear that the opinion of the Baghdad emanationists as well as that of the Lombard cannot stand up to close philosophical scrutiny.

In all of these treatments, Thomas' shares the theological and doctrinal concerns of the Parisian masters. In the arguments against angelic creation of his second hexaemeron account, however, Thomas opposes emanationism on somewhat different grounds, referring to the principles of natural philosophy. Here, discussing creation in the context of a cosmogony of the physical world, he shifts from a focus on the nature of instruments *per se* to the necessity of God's direct creation of matter. Thomas still makes use of his analysis of instrumentality, but he is now especially concerned to understand creation *ex nihilo* in the context of what is necessary for the intelligibility of material natures. In this later treatment prefacing a hexaemeron account, Thomas is concerned to reject instrumental creation in such a way so as to preserve the knowable order of material creation. His discussion suggests that he is aware of reductionist accounts of natural being generally given by the emanationists in terms of a reduction of the principles of nature to those of mathematics. Material beings are intelligible in terms of their own bodily being and a proper account of God's creation must be consistent with such intelligibility. The same Cosmogonical Fallacy that led the philosophers into an erroneous understanding of creation *ex nihilo* also undermines the possibility of scientific knowledge of created material nature. Thomas' clear and consistent rejection of this fallacy not only provides a sound philosophical foundation for true doctrine, but for research in the natural sciences as well.

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# Theistic Creation and Natural Philosophy<sup>I</sup>

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## I. Comments on Michael Tkacz, “Thomas Aquinas, Prime Matter, and the Cosmogonical Fallacy”

Michael Tkacz has offered an insight that Avicenna’s emanationist position commits the cosmogonical fallacy of assuming a kind of prior potency outside of the act of creation; this assumption of a prior potency amounts to a denial of creation. Given that instrumental causes would be a sort of power that is prior to the act of creation, this is a useful insight. In thinking of creation as a production through intermediaries, Avicenna is thinking that in some way creation is a *process*. God creates the First Intelligence, which creates the first soul and first sphere and also the Second Intelligence; this process is repeated until the Ninth Intelligence, which creates our world and gives forms to bring about substantial change. In this sense, creation is a process and a kind of becoming (*fieri*).<sup>2</sup> The insight here is that emanation is not just an alternate

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<sup>1</sup> The following paper is a print version of responses to two papers given at the meeting of the Society for Thomistic Natural Philosophy in conjunction with the meeting of the American Catholic Philosophical Association, 23 November 2019. The two papers were: Michael Tkacz, “Thomas Aquinas, Prime Matter, and the Cosmogonical Fallacy” and Daniel Wagner, “*Credo in Deum Patrem omnipotentiam, Creatorem caeli et terrae: Orders of Primary and Secondary cause as Preambula Fidei.*” The first part of this paper provides my comments on Tkacz’s paper, and the second part provides my comments on Wagner’s

<sup>2</sup> Thomas makes a similar criticism in 1259/65: SCG, lib.2, c.21, n.5, where he argues that instrumental causation implies motion, but creation cannot occur through motion.

theory of creation; it implies something that is incompatible with creation *ex nihilo*.

Let me offer four points by way of commentary on this insight.

First, in ascribing a prior potency, Avicenna is not, in doing so, supposing some sort of *material* prior potency. Strictly speaking, Avicenna agrees with the definition of creation out of nothing given by Thomas that Tkacz has nicely explicated. Avicenna's emanation is not an explanation of a making of something *out of or from* something else as from a material cause; nor does it involve adding any form to a preexisting matter; there is absolutely no material cause presupposed in Avicenna's position on creation. Furthermore, Avicenna does not think of creation as involving a before and an after; it is not a beginning or a becoming in that sense. In fact, Avicenna regards creation as eternally, continually on-going.<sup>3</sup>

Second, for this reason, I believe, Thomas ascribes a doctrine of creation to Avicenna. In his earliest treatment of creation<sup>4</sup> and in later texts, such as the *De potentia*,<sup>5</sup> Thomas attributes a doctrine of creation to Avicenna. In fact, in these texts Thomas explicitly attributes a philosophical argument for creation to Avicenna. This argument is an early version of Thomas' Fourth Way, and the Third Way is also an argument derived from Avicenna. There are also versions of these arguments in other texts from the *Summa theologiae*.<sup>6</sup> Thus, Thomas always thinks that Avicenna has provided a philosophical demonstration that God is the first cause who creates all beings out of nothing. What may be the case, however, is that in later works Thomas is reluctant to give Avicenna explicit credit for holding a doctrine of creation, in the light of Thomas' criticism of the notion of instrumental causality as incompatible with creation. Thus, what Tkacz has shown, if this is right, is that Thomas comes to realize not so much that Avicenna

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<sup>3</sup> Avicenna makes all of these points in i.1020/27: *The Metaphysics of the Healing*, bk. VIII, ch. 3, para. 6–8, p.272–73.

<sup>4</sup> c.1252/56: *In Sent.*, lib.2, d.1, q.1, a.1, c.

<sup>5</sup> 1265–66: *De pot.*, q.3, a.5, c.

<sup>6</sup> Such as 1266–68: *ST Ia*, q.45, a.5 and *ST Ia*, q.65, a.3.

does not hold a doctrine of creation but that he holds an inconsistent doctrine of creation.

Third, the inconsistency of Avicenna's position derives from Avicenna's mistaken claim that angels (or intelligences) can be instrumental causes in creation. This argument is mistaken, as Tkacz has shown, because any instrumental cause must always have some power or ability that is proper (*proprium*) to the instrument. The carpenter's saw must possess the properties of extreme hardness and sharp, spaced teeth for cutting. However much the carpenter is the principal cause of the cutting of the wood, he does not possess, and only the saw does possess, the needed properties for cutting wood. Thus, no instrumental cause can serve in creation, because any instrumental cause would be a creature, and no creature possesses the *proprium* of being. Being, however, is the precise effect caused in creation. No creature, therefore, can instrumentally cause being.<sup>7</sup>

Fourth, I am in agreement with Tkacz that Avicenna's emanationist position is faulty in the light of sound natural philosophy. I take Tkacz's point that Avicenna conflates creation and natural philosophy to the extent that he regards creation as some sort of process. I would say that the more extensive mistake, as Tkacz has also pointed out, is that of supposing that substantial change is the coming to be of a new form, whereas, in fact, substantial change is the coming to be of a *new composite of form and matter*. It is the composite that comes to be and not the form alone. Avicenna's error in natural philosophy is that of supposing a kind of *occasionalist* explanation of substantial change: on the occasion of the

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<sup>7</sup> Tkacz and I agree that this is Thomas' argument, but we might disagree about whether Thomas introduces a new argument in 1266–68: *ST Ia*, q.65, a.3 to show that angels cannot be instrumental causes of creation. I think that Thomas is giving the same argument there that he gave earlier in 1266–68: *ST Ia*, q.45, a.5 and in 1259/65: *SCG*, lib.2, c.21, n.7. I would interpret 1266–68: *ST Ia*, q.65, a.3–4 in this way. In a.3, Thomas argues against Avicenna's emanationist position on the grounds that it misunderstands the role of instrumental causality because an instrument always presupposes something. Thomas here argues that God's act of creation presupposes nothing, and therefore no creature can be a means of creation out of nothing. In Article 4, Thomas makes a different point. If, in an already existent world, angels are causing substantial forms to be, this is not so much an error in creation as an error in natural philosophy, which should teach us that new composite substances come to be from the potency of matter. Substantial change is not the reception of a new form from a separate cause.

natural causes being in proximity, the *dator formarum* gives the substantial form. This, as Tkacz points out, is to deny the potency of matter in substantial change.

## 2. Comments on Daniel Wagner, “No Cause, no Credo”

I have no criticisms of this excellent paper, but I wish to amplify the discussion on one part of it. Dr. Wagner correctly explains that God and creatures are both causes of the same effects, but in different modes: God as the cause of *esse* and creatures as the natural causes of effects. Dr. Wagner has shown clearly how different Thomas’ position is from the occasionalist position. I wish to explain, in addition, that Thomas’ position is also very different from what I regard as a close cousin of occasionalism, namely, *concurrentism*.

The concurrentist position, developed principally by Francisco Suarez, differs from occasionalism in according causal agency to creaturely, secondary causes. The concurrentist, unlike the occasionalist, affirms that creatures are true causes of natural effects. I am the *per se* and immediate cause of the typing on this computer keyboard, and the lighted match is the *per se* and immediate cause of the burning of the paper. The concurrentist, however, insists that God is also the *per se* and immediate cause of these two same natural effects: God is immediately typing on this keyboard, just as I am, and He is also immediately causing the paper to burn, just as the match is. The concurrentist claim is that the very same natural effect is completely, immediately, and *per se* caused both by God and by the creature.<sup>8</sup>

Note, however, two things in Thomas’ position, brought out so well by Wagner, that sharply differentiate Thomas’ position from the concurrentist’s. First, Thomas insists on the analogy between the instrument and the principal cause:<sup>9</sup>

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<sup>8</sup> Suarez argues that the action caused by the creature and the action caused by God’s external action are one and the same action. 1597: *DM*, d.22, s.3, n.2–5. “God’s concurrence with respect to outside things is nothing other than the secondary cause’s action itself insofar as it flows *per se* and immediately from the First Cause.” *On Creation, Conservation, and Concurrence: Metaphysical Disputations 20–22*, p.212.

<sup>9</sup> 1259/65: *SCG*, lib.3, c.70, n.5. God moves the creature “sicut artifex applicat instrumentum ad proprium effectum.” 1265–66: *De pot.*, q.3, a.7: “Sic ergo Deus est causa omnis actionis, prout quodlibet agens est instrumentum divinae virtutis operantis.” Also 1266–68: *ST Ia*, q.105, a.5.

the creature is the instrument, and God is the principal cause. Instruments *are* instruments because they have causal properties that are *not* present in the principal cause. The saw is very hard and has sharp, spaced teeth; these properties are not found in the carpenter, and these properties make the cutting of wood possible, which would be impossible for the carpenter without the saw. Likewise, the saw and the carpenter provide answers to very different questions: why is the cut smooth, rather than rough? The answer is the saw. Why was the cut made at two inches from the end, rather than three? The answer is the carpenter. And so also with creatures and God. Why is this paper burning? Because I lit a match, because the paper is dry, because there is oxygen in the room, and so forth. Why do paper, matches, human actions, natural processes, etc. exist rather than not exist, why is there being rather than non-being, how are these events part of a larger providential plan? The answer to these questions is God. The natural and the divine agent both cause the same effect, but they do so very differently and they provide answers to completely different sets of questions. Also, just as the carpenter could not cut a board without a saw, so God cannot produce natural effects without natural causes. He can produce miracles on his own, but that is a different thing. Only a natural cause can produce a natural effect.

Second, Thomas tells us that the creature is immediately present to the effect and is so in a way that is very different from the way that God is present to the effect. The creature is present by way of what Thomas calls *suppositum*;<sup>10</sup> that is, the creature is substantially present and the creature's action flows from its substance. God, however, is present by power. The creature's action is its own but relatively superficial; God's action is intimate and profound. The creature, thus, is in a completely different relationship to the effect from that of God, even though both are producing the same effect. This is so because the kind of causality for each is radically different. The creature is acting temporally, physically; God is acting eternally and metaphysically. The action of God producing the effect is *not* the action of the creature producing the effect.

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<sup>10</sup> 1265–66: *De pot.*, q.3, a.7: “Sic ergo si consideremus supposita agentia, quodlibet agens particulare est immediatum ad suum effectum. Si autem consideremus virtutem qua fit actio, sic virtus superioris causae erit immediatior effectui quam virtus inferioris; nam virtus inferior non coniungitur effectui nisi per virtutem superioris”.

Now the point that I want to make is that this Thomistic view of creaturely and divine causality is *not* a view that creatures and God are acting *concurrently* in producing the same effect. Suarez developed the position that God and creatures are concurrent causes in producing exactly the same *natural* effect.<sup>11</sup> In particular, Suarez denies the two points just noted. For him, the creature is not an instrumental cause of God the primary cause,<sup>12</sup> and for him creatures are not substantially present while God is present through His power.<sup>13</sup> For Suarez, by contrast, God and creatures are sharing in the very same act: God and the match are producing the same natural effect of the burning of the paper. God, of course, as infinite cause could produce this natural effect on His own, but He allows the match to share in the production of the fire.

My purpose in bringing Suarezian concurrentism into this discussion is to make the following warning. Once you say, as Suarez does, that God and the creature are sharing in producing the same act, it then becomes clear that creatures are not really needed to produce natural effects. Since God is producing these natural effects, and since God's power is infinite, the creature's power is gratuitous and not needed.<sup>14</sup> This is exactly the conclusion that Malebranche drew when he considered the Suarezian concurrentist position.<sup>15</sup>

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<sup>11</sup> 1597: *DM*, d.22, s.2, n.17. God's action is the very same action as that of the creaturely cause.

<sup>12</sup> 1597: *DM*, d.22, s.2, n.2–5; n. 17.

<sup>13</sup> 1597: *DM*, d.22, s.1, n.16.

<sup>14</sup> I have developed this argument more extensively: Steven Baldner 2016: "Thomas Aquinas and Francisco Suarez on the Problem of Concurrence".

<sup>15</sup> He drew this conclusion but reversed it. If creatures are truly causes, then the concurring God really does nothing. Malebranche's point is that if either God or creatures are made the cause of the natural event, then the other cannot be a cause at all. Malebranche 1674–75: *Elucidations of the Search after Truth*, Elucidation 15, 4<sup>th</sup> Proof, Reply.

Wagner has shown that occasionalism is a slippery slope down to phenomenalism; I want to say that concurrentism is an equally slippery slope to occasionalism.<sup>16</sup>

There is, however, a complication in Thomas' position that must be considered. The complication has to do with the fact that when Thomas thought of natural, secondary causes, he thought of them in a very broad context, including the heavenly bodies in this broad understanding of nature. Natural causes produce natural effects, but the nature that Thomas thought about was not just the corporeal bodies in our sublunary realm. The heavens, too, are a part of nature, and they are an integral part of natural, secondary causality, according to Thomas.

The philosophical reason for this broader consideration of nature is that the bodies in our sublunary realm, composed as they are of the four elements (earth, water, air, and fire), are not adequate to produce substantial change.<sup>17</sup> The active qualities from these elements are, we might say, the basic "forces" of the natural world that we know. These qualities (hot/cold; wet/dry; motion toward/away from the center) explain the interaction of all bodies in our world: why it is that when one substance is consumed by another it acquires certain properties of the thing consumed, why some things can act on some other things but not on all; and so forth. These qualities, however, are insufficient to produce substantial change. They are insufficient because their effects amount to what Thomas considers only material dispositions.<sup>18</sup> The early natural philosophers considered such material dispositions to be sufficient to explain nature, but that was because they left substantial change out of their account. Their consideration of nature

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<sup>16</sup> For different views, see Rogers, "What's Wrong with Occasionalism?" especially p.349–351. Rogers argues that Suarez and Thomas both hold a concurrentist position. A defender of Suarez' concurrentism is Alfred J. Freddoso, who argues that a doctrine of creation and conservation is insufficient because it results in a God who is too remove, a God who causes only the conditions of creatures' acts and not the acts themselves. See Freddoso 1991: "God's General Concurrence with Secondary Causes: Why Conservation is not Enough"; and Freddoso 2002: "Introduction" to *On Creation*, p.ci-cvii.

<sup>17</sup> In the passage that follows, I am explicating Thomas' doctrine given in 1266–68: *ST Ia*, q.115, a.3.

<sup>18</sup> 1266–68: *ST Ia*, q.115, a.3, ad.2.

was exclusively in terms of matter, but matter is insufficient to account for change, especially substantial change.

The Platonists<sup>19</sup> advanced upon this position, as they recognized the need for substantial form. They proposed separate substantial Forms to account for substantial change, but their account is deficient because they give an account of forms, but not an account of the generation and corruption of *composites* of matter and form. To posit a source of forms is not to explain the generation of composite things, because forms are not what is generated or destroyed.

In general, Thomas argues that there must be some superior cause, some cause beyond this sublunary world, of substantial change. The multitude of this world must be reduced to some unity, and motion must have a cause that is unmoved. However, the cause of substantial change cannot be uniformly unchanging (as the separated Forms would be), because the substantial changes do not occur always and do not occur with completely uniform results. Thus, in order to account, on the one hand, for an immobile and unitary cause of the mobile and multiform, and, on the other, to account for the irregularity of substantial change, a cause that is both immobile in some sense but also mobile in some other sense is required. The heavenly bodies fit this need.

“Since any multitude comes from a unity, and since what is immobile always stays the same, whereas what moves is various, we should realize that in the whole of nature all motion comes from what is immobile. Accordingly, to the extent that things are more immobile, to that extent they are more the causes of things that are more mobile. Heavenly bodies, however, among all bodily things, are the most immobile, for they only move with local motion. And, therefore, the motions of bodies here below are derived from the motion of a heavenly body as from a cause.”<sup>20</sup>

“It is necessary to posit some active mobile principle, that, through its presence and absence, causes variety in generation and corruption in bodies here below. The heavenly bodies are a cause of this sort. And, therefore, whatever here below generates and moves toward the species [*movet ad speciem*—that is, moves toward substantial change] is as it were an instrument of the heavenly

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<sup>19</sup> Including Avicenna, according to Thomas.

<sup>20</sup> 1266–68: *ST* Ia, q.115, a.3, c.

body, as is said in *Physics*, II, ch.2 (194b13), “human beings are generated by human beings, and by the Sun.”<sup>21</sup>

We think that like is produced by like and that the heavenly bodies are not like the things here below, but Thomas finds a sufficient similarity between the heavenly and earthly bodies in that the heavenly bodies are universal causes required for generation and destruction.<sup>22</sup> This kind of similarity is a similarity in what Thomas would call non-univocal causes. Thus, even God is similar to the creatures He causes as the source of their being.

Finally, the causality of the heavenly bodies is not completely uniform, because it is not always operating, unlike God’s causality, which is always operating. Furthermore, the influence of the heavenly bodies is not strictly necessitating on bodies here below, because the varying material conditions affect the way in which the influence is received.<sup>23</sup>

The role of the heavenly bodies in causality provides a way for Thomas to explain the influence of God in moving His creatures. Since all substantial change in our realm is under the constant influence of the heavenly bodies, since the heavenly bodies are moved by the separate substances, and since the separate substances are continually caused by God, it follows that God is constantly moving things in our realm. He does so, not immediately, by causing changes as an occasionalist (or concurrentist) would have it, but He does so effectively through the natural and universal influence of the heavenly bodies, the agency of which, He is ultimately and constantly causing.

With this broader understanding of the causality of nature in mind, including that of the heavenly bodies, and also with God’s creative causality in mind, we are in a position to understand the very extensive ways in which Thomas explains that God is continually causing the things in this world. None of this causality, however, reduces to an occasionalist or concurrentist position.

In a crucial text from the *De potentia*, Thomas explains a four-fold way in which God is causing creatures in this world. The image Thomas uses throughout this

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<sup>21</sup> 1266–68: *ST Ia*, q.115, a.3, ad.2.

<sup>22</sup> 1266–68: *ST Ia*, q. 115, a.3, ad.3.

<sup>23</sup> 1266–68: *ST Ia*, q. 115, a.3, ad.4.

text is the one that Suarez rejects: that God is the cause of all creatures and their actions insofar as creatures are the instruments of God's power. "Thus, therefore, God is the cause of every action insofar as any agent is the instrument of the divine operating power."<sup>24</sup>

There are four ways, according to Thomas, in which God is the First Cause and the creature is God's instrument in causing other things. First, God gives all creatures the powers of acting that they have. Second, God conserves these powers in existence as long as the creatures exist. "In this way God causes all actions in nature because He has given to natural things the powers through which they can act, not merely as a generator gives the power to the light and the heavy elements and does not conserve it, but rather as a cause continually holding the power in being; ... thus the result is that God can be said to be the cause of action insofar as He causes and conserves the natural power in being."<sup>25</sup> Third, God moves the creaturely agent to act, as an instrument is brought into position or applied to its task. This sort of action is brought about, not immediately by God, but through the motion of the heavenly bodies, which, as we have seen are influential on all terrestrial bodies. Fourth, God causes as a universal, intimate cause in all creatures, operating in all things more immediately and intimately than any other cause.<sup>26</sup>

These four different ways reduce, really, to two. The first, second, and fourth are different ways of expressing the fact that God is creating all things, making them to exist for as long as they exist, and causing them most profoundly; these are all expressions of God's one creative act of giving being to creatures. The third expresses the universal influence of the heavenly bodies on motion and change

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<sup>24</sup> 1265–66: *De pot.*, q.3, a.7, c.: "Sic ergo Deus est causa omnis actionis, prout quodlibet agens est instrumentum divinae virtutis operantis."

<sup>25</sup> 1265–66: *De pot.*, q.3, a.7, c.: "hoc modo Deus agit omnes actiones naturae, quia dedit rebus naturalibus virtutes per quas agere possunt, non solum sicut generans virtutem tribuit gravi et levi, et eam ulterius non conservat, sed sicut continue tenens virtutem in esse;...ut sic possit dici Deus causa actionis in quantum causat et conservat virtutem naturalem in esse."

<sup>26</sup> 1265–66: *De pot.*, q.3, a.7, c.: "Quanto enim aliqua causa est altior, tanto est communior et efficacior, and quanto est efficacior, tanto profundius ingreditur in effectum, et de remotiori potentia ipsum reducit in actum".

in our world. God creates all things, now and always, and the heavenly bodies generate substantial changes and cause alterations in our world. In these ways, God is causing everything, but God is not the immediate cause of any natural effect qua natural effect. The immediate cause of any natural change, what Thomas calls the *supposit*, is always the creature. “If, therefore, we consider the agent as *supposit*, any particular agent is immediate to its effect. If, however, we consider the power by which an action occurs, then the power of the higher cause will be more immediate to the effect than the power of the lower cause.”<sup>27</sup>

The result of considering this complication is no different from what we saw in the beginning: God is the immediate and sole cause of his creative act, giving being and powers to all creatures, conserving them in being, and working in them more intimately than any other cause. Natural effects, however, are produced immediately by natural things, and not as natural effects immediately by God. It so happens that the extent of natural causality is very broad in Thomistic natural philosophy, including both terrestrial and heavenly natural causes, but the fact that natural effects are immediately caused by natural causes remains unaltered.

The fundamental mistake of occasionalist and concurrentist doctrines is that of supposing that God is the *immediate cause* of all natural effects. If this is claimed, there is no possibility of true creaturely agency. It does not matter whether one says that creatures in fact do no causing (occasionalism) or whether they are allowed to cause effects for which they are not needed at all (concurrentism). In either case, the creature is not a necessary cause of the effect. To maintain, however, as Thomas does, that creatures are true causes is to maintain that there is a necessary connection between them as causes and their effects. This necessary connection between creaturely cause and effect is what is denied by occasionalism and concurrentism.

### 3. Postscript

The two excellent papers by Tkacz and Wagner might be seen to have a common theme: the misunderstanding of instrumental causality. In the case of Avicenna, the mistake is to think that an instrument can do more than it can. No

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<sup>27</sup> 1265–66: *De pot.*, q.3, a.7, c.: “Sic ergo si consideremus supposita agentia, quodlibet agens particulare est immediatum ad suum effectum. Si autem consideremus virtutem qua fit actio, sic virtus superioris causae erit immediatior effectui quam virtus inferioris”.

instrument, however, can cause what it does not have from its own nature; and no creature has being from its own nature. Hence, no creature can be an instrument of creation *ex nihilo*. In the case of occasionalists and concurrentists, the mistake is to think that instruments do too little. Their mistake is to think that an instrument has nothing properly of its own to contribute to the effect and that an instrument prevents a primary cause from being an immediate cause. An instrument, however, can only be an instrument if it has something that the primary cause does not, and its instrumentality does not block the primary cause from being intimately united to the effect but rather facilitates it. We creatures are instruments, but that fact means that God is more not less intimately at work in our world; the fact that God *cannot* be a natural cause draws Him closer, not farther away.

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