FURTHER THOUGHTS ON THE HEAVENLY BODY, ARISTOTLE'S *AETHER*, ST THOMAS'S 'FIRST ALTERING BODY'

> "[T]he entire universe is to be considered prior to its parts, simple bodies before the compound, [and] among simple bodies the first, the heavenly body through which all others are sustained, is first to be considered…"
>
> St Thomas Aquinas[1]

The First Altering Body

In his commentary on Book II of Aristotle's *Physics* St Thomas says this:

> "[T]o the extent that some beings are superior to others, to that extent they have forms which are less contracted and more dominant over matter; for matter contracts the power of form. And so that which is prior in causing is found to be prior in some way under the reason of a more universal predication. For example, if fire is the first in heating, then the heavens are not only the first in heating but also the first in producing alteration."[2]

Now alteration is a species of motion,[3] which is *the act of what is being actualised as it is being actualised*,[4] and alteration is either—

- any accidental change, or
- any change according to quality, whether its instantaneous generation or corruption, or its continuous intensification or remission, or
- its continuous movement from one quality to another specifically diverse.[5]

In his *De Caelo* Aristotle sheds further light on the topic:

> "Alteration is movement in respect of quality… [Q]ualitative states and dispositions do not come into being without changes of properties. But we see that all natural bodies which change their properties are subject without exception to increase and diminution."[6]

In *How the Universe Operates* I argued that this first altering body, Aristotle's *aether*, is not confined to the heavens but is universal and that it contains and influences all material reality. I suggested it does so via the first accident of every material body, *quantity*, and so plays an essential part in the formation and ongoing existence of every material substance, but not as an element in its composition. In his commentary on Book II of Aristotle's *Physics* St Thomas seems to support this position. He identifies four kinds of efficient cause—the perfecting, the preparing (or disposing), the assisting and the advising causes.[7] The *preparing or disposing cause*, he describes, as that which renders matter, or the subject (whatever it may be), suitable for its ultimate completion, and the *assisting cause* as that which operates not for its own end but for the end of another. It seems to me that each of the first three of these classes of efficient cause describes a function of the first altering body in the production and conservation of material substances.

---

1 *In I De Caelo*, Prologue
2 *In II Phys*. L. 6, 195a (189)
3 *In IV Phys*. L. 23, 631. There are four such species: generation, increase, alteration and local motion.
4 A. M. Woodbury Ph. D, S.T.D., *Natural Philosophy*, n. 319
5 Woodbury op. cit., n. 439
6 *De Caelo* I, 3 and see *How the Universe Operates* [hereafter *HTUO*] p.40
7 *In II Phys*. L. 5, 180

The First Body's Immutability & Immobility

In Book III of the *Summa Contra Gentiles* St Thomas teaches:

> "For some substances composed of matter and form, the form fulfils the entire potency of the matter so that there remains in their matter no potency for another form… Since privation is the negation… of something which can be present in a substance… privation cannot be associated with a substance whose form exhausts the entire potency of its matter."[8]

St Thomas agreed with Aristotle that this body is superior to any mundane body,[9] its superiority manifest in a motion proper to it which is "not corrupted when it reaches [its] terminus (since its beginning and end are the same)" and is therefore "more simple and perfect".[10] This characteristic of the heavenly body "through which all other [bodies] are sustained" was manifest in the behaviour of the celestial bodies, sun, stars, planets and moon, which were clearly part of it.

In Book II of the *Contra Gentiles* St Thomas contrasts the differing characters of the celestial bodies and those with which we are familiar.

> "When natural bodies are in contact they alter one another… being mutually united not only by way of their quantitative extremities, but also by way of likeness in quality or form, as long as the altering body impresses its form upon the body altered. Now, if the quantitative extremities alone be considered, then contact must in all cases be mutual.
>
> "But if attention is given to activity and passivity, it will be found that certain things touch others and are not themselves touched, while certain things are themselves touched and touch nothing else. For indeed, the heavenly bodies touch elemental bodies in this way, inasmuch as they alter them, but they are not touched by the elemental bodies [in return] since they are not acted on by them…[11]

I contended that the two philosophers' opinion about the celestial bodies was constrained by the data available—there having been little development in experimental science in the 1,600 years between them—and that with the knowledge available to us today the better view is that the heavenly body does not move: it is *per se* immobile.[12] Since this body acts upon other bodies but is not acted on by them in return it is also revealed as immutable. This sounds with what St Thomas has to say in Book III of the *Contra Gentiles*:

> "[T]he nearer certain things are to God, the more they participate in His likeness (as completely immutable)… as do the separate substances which most closely approach the likeness of God. Moreover, the ones which are next to these, and which are moved immediately by those which always exist in the same way, retain a certain type of immobility by the fact that they are always moved in the same way, and this is the case with the celestial bodies."[13]

---

[8] *SCG* III, 20, [4]

[9] Though St Thomas seems to have had his reservations. "[T]hings are found to be more perfectly ordered the nearer they are to God. For in the lower types of bodies… there is sometimes found to be a falling away from the regular course of nature… but this never happens [with] the celestial bodies, though they are somewhat mutable…" *SCG* III, 64, [9]

[10] *In VIII Phys.* Ll. 14-19

[11] *SCG* II, 56, [8]

[12] *HTUO* p. 86, 87

[13] *SCG* III, 72, [4]

Now, as a result of the discoveries of modern science, we must recognise that there are problems with the philosophers' assessment of the celestial bodies. But if it be conceded that the heavenly matrix which contains them is the one entity among inanimate material things closest to the Author of reality, and that it is the first and perfect instrument of His activity throughout the universe, it seems to follow from what St Thomas says that this first altering body should share in His immutability and immobility.

The Difficulty of the Celestial Bodies

In a paper published in *The Thomist*, *An Inductive Study of the Notion of Equivocal Causality in St Thomas*, Dr Chris Decaen instances St Thomas's teaching on the influence of the most significant of the celestial bodies, the sun.[14] He writes—

> "[h]eat… fire itself, the desiccation of bodies, the allegedly spontaneous generation of vermin in putrefying matter, and even of man himself in human generation are all effects of the sun, according to the mediaevals. In fact, St. Thomas says that the sun is the cause of all motions, changes, qualities, and substantial forms of generable substances."

He adds this extensive footnote—

> "[T]he sun as an equivocal agent cause of fire, see *Q. D. de Pot*., q. 7, a. 1, ad 8; of dryness, see *SCG* I, ch. 31, n. 1; of "certain animals" in putrefying matter, see *Comp. Theo*., ch. 43 and *SCG* IV, ch. 10, n. 4; of man, see *Comp. Theo*., ch. 198; *Q. D. de Malo*, q. 4, a. 3.; and *In VIII Phys*., lect. 10, n. 4; and of all motion, generation, life, and substances, including their manifold qualities, see *In II Phys*., lect. 4, n. 10; *STh* I, q. 4, a. 2, ad 1; *SCG* III, ch. 24 (passim); and *In Div. Nom*., ch. 4, lect. 3, n. 7."

St Thomas sets out the foundation on which this view is grounded in Book II of the *Contra Gentiles*:

> "The heavenly bodies either have no matter in common with lower bodies or they have only prime matter in common with them, for the heaven is neither composed of the elements nor is it of an elemental nature…"[15]

In Book III he addresses what he assesses as their function: they are perfected, tend to the divine likeness, by being perfected in themselves, and by being the cause of others.

> "A created thing tends toward the divine likeness through its operation… [and thus] one thing becomes the cause of another…[16]
>
> "The end of movers that actively move is to attain the divine likeness by being the causes of others. They… cause generation and corruption and other changes in lower things. So the motions of the celestial bodies, as actively moving, are ordered to the generation and corruption which take place in these lower bodies."[17]

Later in the same Book he elaborates:

> "The higher a body is in place the more formal is it found to be… since it is the function of form to limit just as it is of place…. But the celestial bodies are superior in place to all bodies. So they are more formal than all the others and therefore more active. So they act on the lower bodies [which are] thus disposed by them."[18]

---

[14] *The Thomist* 79, (2015), pp. 213-263
[15] *SCG* II, 43, [3]
[16] *SCG* III, 21 [2]
[17] *SCG* III, 22 [5]
[18] SCG III, 82, [2]

Now St Thomas, and Aristotle before him, was ignorant of the fact that the apparent circular, and perfect, motion of the celestial bodies is but a function of the motion of the planet on its axis (circular) and of its motion around the sun in the heavenly matrix. Nor did either of them know, what modern science reveals, that the sun and each of the bodies that people the heavens shares in the elements from which all bodies of common material being are constituted. Accordingly, while "the heaven", that is, the heavenly or first altering body, is "neither composed of the elements nor… of an elemental nature", this is not the case with the celestial bodies. Of the philosophers' conclusions, then, something must be discarded but something can be retained. What can be discarded is the ascription of powers to the sun and the other celestial bodies.[19] What can be retained is the pre-eminence in nature and powers of the matrix that contains them.

I have argued that the heavenly body, *aether*, is universal, not confined to the heavens, and exercises its influence everywhere.[20] St Thomas teaches:

> "[M]otion with respect to form is caused by local motion. The first local motion, however, is that of the heaven. Hence all motion towards form is brought about through the mediation of the heavenly motion…"[21]

Science, and with it sound philosophy, is bound to acknowledge that the motion of celestial bodies within the heavenly matrix is perfect, circular, motion.[22] With little violence we can adjust what St Thomas says to accord with science's discoveries by urging that while the celestial bodies move in this way, the heavenly, or first altering, body does not.

St Thomas's contention that all motion towards form in mundane bodies, i.e., towards *their essences or natures*, is brought about through the mediation of the heavenly motion, may be maintained, then, if it is acknowledged that this motion is the effect the heavenly body produces in its dependents, all bodies of common material being. Given the extent of the power of alteration noted above, there is no reason why we should not ascribe to the first body the variety of effects St Thomas attributes to the sun in respect of living things, their generation and conservation, as well as in respect of inanimate things and accidental realities. Consistent with this thesis is St Thomas's comment in Book II of the *Contra Gentiles*:

> "All things which are potentially existent in the matter of generable and corruptible entities can be actualized by the active power present in the heavenly body which is the primary active force in nature.[23]

Simultaneity and 'the Speed of Light'

Readers of *How the Universe Operates* may have struggled with my defence of the philosophers' contention that the lighting of earth's atmosphere occurs instantaneously when modern

---

[19] This caveat should, however, be lodged. Further discoveries may reveal the celestial bodies to be instruments of the heavenly body in ways that at present we do not know.

[20] Demonstrated by the spontaneous appearance amongst us of sphericity in plastic bodies such as raindrops, soap bubbles and the like when removed from the influence of gravity. Cf. *HTUO* p. 92

[21] *SCG* II, 43, [6]

[22] Including that of our own planet's rotation around its axis and of the planets around the sun in our solar system. As to the elliptical, rather than perfectly circular, motion of celestial bodies, I have indicated the solution in *HTUO* at p. 85 fn. 86, and at p.96. It is a function of the interplay of the heavenly body's influence on their diverse foci.

[23] *SCG* II, 22, [5]

science can show that it occurs at a determinate speed, 299,792.458 km/s '*in vacuo*'. St Thomas sheds further light on the issue in what he has this to say about universal causes.

> "As a particular cause is to a particular effect so is a universal cause to its effect. Now a particular cause must be simultaneous with its proper particular effect… [and] agent and patient must be simultaneous".[24]

So, too, a universal efficient cause must in its operations be simultaneous with its (universal) effects. Notwithstanding its superiority to all bodies of common material being the heavenly body is yet material *and bound by matter's limitations*.[25] St Thomas identifies the source of these limitations in the following passage:

> "[E]very bodily form is combined with quantity, but quantity hinders action and motion…"[26]

The heavenly body shares with bodies of common material being the accident *quantity* (the first of the accidents) that gives it physical extension but we are not to understand that it does so in the same manner that it does with bodies with which we are familiar. 'Quantity', like 'material', is an analogous term (see footnote 25) and quantity said of the heavenly body differs from quantity said of bodies of common material being because—

> "the accidents of the celestial bodies are of a different notion altogether and… wholly disproportionate to the accidents of inferior bodies".[27]

Now, if *aether*, the first altering body, is immobile as I contend, it suffers no hindrance from quantity in respect of *motion*. It does suffer, however, in respect of *action*, i.e., in respect of its operations. Here is the philosophical reason why the speed of operation of its proper accidents, light, electromagnetic energy and (Einstein's theses conceded) gravitational force, is not infinite, but limited to ***c***, 'the speed of light'.

The Limitations of the Human Intellect

Why is it, the reader may ask, that the constitution of the universe is so obscure? And, assuming the correctness of the thesis I have advanced in *How the Universe Operates*, why do its causes appear to be completely different to those promoted by modern science?

In Book IV, and elsewhere in the *Contra Gentiles*, St Thomas sets out the limitations of our intellectual powers as a consequence of their dependence on a body.

> "[The sense powers] from which our knowledge begins is occupied with external accidents which are proper sensibles, such as colour, odour and the like. As a result the intellect, through such external accidents can scarcely reach perfect knowledge of a lower nature, even in the case of natures whose accidents it comprehends perfectly via sense. Much less will [it] manage to comprehend the natures of those things which provide the senses with few accidents.

---

[24] *SCG* III, 68, [4], [5]

[25] It being understood that 'material' said here is used analogously. That is, it does not signify the same reality as 'material' when said of a body of common material being. To explain the issue in the language of logic, a term said of two inferiors (two different things of which it is predicated) is analogous if it signifies in each a character somewhat similar and somewhat dissimilar but more dissimilar than similar. Cf. also *HTUO,* Glossary, p. 124, 'Analogical (analogy)'.

[26] *SCG* III, 69, [7]

[27] *In II De Caelo*, 1, 4, n. 3 (& cf. *HTUO* p. 37). I accept that I seem here to be quoting St Thomas against what I have just argued. But in context he is to be understood as contrasting the heavenly body with the bodies with which we are familiar.

> "And it will do so even less well in the case of things whose accidents cannot be grasped by the senses, though these may be perceived through certain deficient effects. But even if the natures of things themselves were known to us we could have little knowledge of the order according to which divine Providence disposes them relative to each other and directs them to an end, since the plan of divine Providence is hidden from us."[28]

The greatest gift man has is that of intellect.[29] By means of it we can, working from effects, arrive at causes which are hidden from the senses. This seems to be what St Thomas is speaking of in the above extract. The materialistic view that dominates the modern world is simplistic and facile. Consistent with its zeitgeist that embraces the postulates of atheism, it is reluctant to admit anything that falls beyond the grasp of the senses. The effect of this is to diminish the intellect's eminent powers - even that *limited edition* of intellect (so to speak) in which men share – and to cast doubts over our yearning for ultimate causes.

It is reasonable for men to acknowledge the existence of the One Being who created them and who conserves them in existence. Until they turn their backs on atheism and its condign (and stilted) philosophy men will struggle to grasp the ultimate causes of the universe. Of this they are but infinitesimal *material* parts but the majesty and intricacy that attend it, reflecting the infinite reality of its Creator, can assist in demonstrating to them their *immaterial* greatness as persons, and move them to acknowledge God's infinitely greater goodness.

Michael Baker
June 16th, 2024—*Fourth Sunday after Pentecost*

[28] *Summa Contra Gentiles* (hereafter *SCG*) IV, 1, [3]
[29] *HTUO*, pp. 116, 119, 120