

Détournons-nous de ceux-là qui vont vers une porte qu'aucune clé n'ouvre. La physique, les théories physiques, pourquoi nous donneraient-elles une preuve, que dis-je, un soupçon relatif aux Causes premières? On rougit d'avoir à rappeler des choses si simples, mais tant de gens se laissent éblouir par les chefs-d'œuvre d'une science indéfiniment puis-sante qu'il faut bien le faire. Revenons aux choses sérieuses et laissons face à face Descartes et Pascal se contempler éternellement sans jamais pouvoir se dominer; et, pour mieux les saluer, simplifions en les nommant les deux aspects de la théorie physique qu'ils nous lèguent: le premier est une action; le second est une sagesse.

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Discrete Time and Illumination

*Deus movet creaturam
spiritualem per tempus.
St. AUGUSTINE.*

The present note which attempts to set in relief the function of discrete time in angelic illumination was suggested by a brief passage in John of St. Thomas' *Cursus theologicus*, t.2, disp.10, a.3, p.98, n.5¹. Before we discuss this passage, we must set forth certain notions and positions connected with this particular question.

The aevum is the measure of the duration of a being incorruptible according to its substance, yet variable in its operations. Hence this measure applies not only to the very substance and faculties of the angel, but also to those of his operations which are inseparable and invariable, namely the knowledge and love of himself. His cognitive and voluntary operations, however, are not confined to himself. The angel knows other beings as well; and while he also knows them in knowing himself, this knowledge is confused and quite inadequate, as St. Thomas points out:

...The things which are beneath the angel, and those which are above him, are in a measure in his substance, not indeed perfectly, nor according to their own proper formality—because the angel's essence, as being finite, is distinguished by its own formality from other things—but according to some common formality. Yet all things are perfectly and according to their own formality in God's essence, as in the first and universal operative power, from which proceeds whatever is proper or common to anything. Therefore God has a proper knowledge of all things by His own essence; and this the angel has not, but only a common knowledge².

It is for this reason that, to know other things distinctly, he needs added intelligible species, as St. Thomas has shown in the body of the same article:

...But the intellective power of the angel extends to understanding all things: because the object of the intellect is being in common or truth in common. The angel's essence, however, does not comprise all things in itself, since it is an essence restricted to a genus and species. This is proper to the Divine essence, which is infinite, simply and perfectly to comprise all things in Itself. Therefore God alone knows all things by His essence. But an angel cannot know all things by his essence; and his intellect must be perfected by some species in order to know things.

In article 3 of the same question, St. Thomas goes on to show that the intelligible species of the higher angel are more universal and hence fewer in number than the species of the lower angel:

...For this reason are some things of a more exalted nature, because they are nearer to and more like unto the first, which is God. Now in God the whole plenitude of intellectual knowledge is contained in one thing, that is to say, in the Divine essence, by which God knows all things. This plenitude of knowledge is found in created

1. All references are to the Sorensen edition of this work.

2. *Ia*, q.55, a.1, ad 3.

intellects in a lower manner, and less simply. Consequently, it is necessary for the lower intelligences to know by many forms what God knows by one, and by so many the more according as the intellect is lower.

Thus the higher the angel is, by so much the fewer species will he be able to apprehend the whole mass of intelligible objects. Therefore his forms must be more universal, each one of them, as it were, extending to more things.

Obviously, the universality of these intelligible species is not just universality according to predication, like the universality of *animal* which is predicable both of man and of brute. To know man or brute merely as animals, is to know them imperfectly. Distinct knowledge would require either distinct means of knowing as is the case of our knowledge of things; or, if both natures were to be known distinctly, the means of knowing would have to be what St. Thomas calls *universal virtue*. The explanation he gives in Book II of the *Summa Contra Gentiles*, c.98, is to the point:

... Now from the very fact that a particular substance is intellectual, it is capable of understanding all being. Wherefore, as a separate substance is not constituted by its nature as actually understanding all being, that substance, considered in itself, is in potentiality, as it were, to the intelligible likenesses whereby all being is known, and these likenesses will be its acts, according as it is intellectual. But it is not possible that these likenesses be otherwise than many; for it has already been shown that the perfect likeness of the whole universal being cannot, but be infinite; however, just as the nature of a separate substance is not infinite but limited, so an intelligible likeness existing therein cannot be infinite, but is confined to some species or genus of being. And so for the comprehension of all being are required many likenesses of this kind. Now, the higher a separate substance is, the more is its nature similar to the Divine nature; and, consequently, it is less limited, as approaching nearer to the perfection and goodness of the universal being, and for this reason it has a more universal participation of goodness and being. Consequently, the intelligible likenesses that are in the higher substance are less numerous and more universal. This agrees with the statement of Dionysius, *Celestis Hierarchie* XII, that the higher angels have a more universal knowledge; and it is said in the *De Causis* (sect.9) that the higher intelligences have more universal forms. Now, the highest point of this universality is in God, Who knows all things by one, namely His essence: whereas the lowest is in the human intellect, which, for each intelligible object, requires an appropriate intelligible species commensurate with that object.

It follows that with the higher substances knowledge through more universal forms is not more imperfect, as it is with us. For through the likeness of animal, whereby we know something in its genus only, we have more imperfect knowledge than through the image of man, whereby we know the complete species: since to know a thing as to its genus only, is to know it imperfectly and potentially, as it were, whereas to know a thing as to its species, is to know it perfectly and in act. Now our intellect, since it obtains the lowest place among intellectual substances, requires likenesses particularized to that extent that to each proper object of its knowledge there must needs correspond a proper likeness in it: wherefore, by the likeness of animal it knows not rational, and, consequently, neither does it know man, except in a certain respect. On the other hand the intelligible likeness that is in a separate substance is of more universal virtue, and suffices to represent more things. Consequently, it argues not a more imperfect but a more perfect knowledge: because it is virtually universal (*universalis virtute*), like the active form in a universal cause which, the more universal it is, the more things to which it extends, and the more efficacious its production. Therefore by one likeness it knows both animal and the differences of animal: or again it knows them in a more universal and more contracted way according to the order of the aforesaid substances¹.

1. See also *In II Sententiarum*, d.3, q.3, a.2; *Q. D. de Veritate*, q.8, a.10; *Contra Gentiles*, I, cc.50-54; *Ia*, q.14, a.6; q.55, a.3; *De Causis*, lect.10.

Hence we might say that as we descend the hierarchy of the separated substances, the number of intelligible species tends toward equality with the number of objects known, so that the means by which the lower angel reaches the universe are more scattered than those by which the higher angel reaches it. The *thesaurus* of his species is numerically greater but inferior in value, as a bulging pocket of copper coins may be worth less than a single piece of silver. Although the higher knows many things by a smaller number of species, he knows them more distinctly than the lower does. His view is more concentrated and penetrating. In the lower angel the very multiplicity of his species and the corresponding division of his view imply a relative confusion in his knowledge.

The above prolegomena will suffice to show how the multiplicity of intelligible species gives rise to a radically new kind of duration in the life of an angel, a duration which implies a succession, and which in this precise respect is comparable to our cosmic time. For an angel can actually and simultaneously consider only those things which are represented in a single species. This means that in order to tour his intelligible universe he must use his various species successively. Let us read at least one passage where St. Thomas explains why this is so:

As unity of term is requisite for unity of movement, so is unity of object required for unity of operation. Now it happens that several things may be taken as several or as one, like the parts of a continuous whole. For if each of the parts be considered severally, they are many; consequently, neither by sense nor by intellect are they grasped by one operation, nor all at once. In another way they are taken as forming one in the whole, and so they are grasped both by sense and intellect all at once and by one operation, as long as the entire continuous whole is considered, as is stated in *De Anima*, III. In this way our intellect understands together both the subject and the predicate, as forming parts of one proposition; and also two things compared together, according as they agree in one point of comparison. From this it is evident that many things, in so far as they are distinct, cannot be understood all at once; but in so far as they are comprised under one intelligible concept, they can be understood together. Now everything is actually intelligible according as its likeness is in the intellect. All things, then, which can be known by one intelligible species, are known as one intelligible object, and therefore are understood simultaneously. But things known by various intelligible species, are apprehended as different intelligible objects.

Consequently, by such knowledge as the angels have of things through the Word, they know all things under one intelligible species, which is the Divine essence. Therefore, as regards such knowledge, they know all things at once: just as in heaven our thoughts will not be fleeing, going and returning from one thing to another, but we shall survey all our knowledge at the same time by one glance, as Augustine says (*De Trin.*, XV, 16). But by that knowledge whereby the angels know things by innate species, they can at the one time know all things which can be comprised under one species; but not such as are under various species¹.

Thus in using the variety of his intelligible species the angel produces that successive duration which is called discrete time. It is called time because of the succession. This it has in common with time as opposed both to eternity and eviternity. It is called discrete because of the absence of continuity, by which it differs from cosmic time. That it cannot be

1. *Ia*, q.58, a.2, c.—See also *In II Sent.*, d.3, q.3, a.4; *In III Sent.*, d.14, a.2, q.1, c.4; *De Ver.*, q.8, a.14; *Quodlib.*, I, a.2; *Contra Gentiles*, I, c.55; *Ia*, q.12, a.10; q.85, a.4.

continuous is shown from the fact that continuity is formally quantitative and hence implies matter.

Yet, as John of St. Thomas points out, the absence of continuity does not mean that the duration of the use of a single species must be equated with an indivisible instant of cosmic time.¹ While any single consideration is indivisible, it may be related to a great span of our time. Like the indivisibility of both eternity and the aevum, the instant of discrete time differs widely from that of cosmic time. In the cosmic instant we must distinguish two aspects: one which bespeaks perfection, namely indivisibility as opposed to the imperfection of division; and one which bespeaks imperfection, namely its being the minimum, the least of the lowest kind of duration. In spiritual beings, the indivisibility of their duration excludes only the paucity of the cosmic instant.

It is clear that, when we view them in a common measure, the lower angel will diffuse a much more fragmentary succession in making the tour of his intelligible universe than does the higher angel. Whereas the higher angel in contemplating a manifold of objects may rest in one species, the lower angel in order to cover the same manifold must move about, as it were, turning from one species to the other. Yet even in one single consideration, the vision of the higher angel endures more perfectly than either the single or the successive views of the lower.

Because we cannot conceive supra-cosmic duration except from the viewpoint of our time, permanence without succession is known to us only through negation—not the negation of permanence but the negation of the imperfection of that permanence which can be realized only in succession. Now just as the eternal duration of one angel is more regular than that of another, so too the permanence of the use of an intelligible species (whether this permanence be wilfully protracted or brief) will have greater uniformity in one angel than in the other according to their degree of perfection.

Applying the general principle that what is most simple and uniform in a genus is the principle and measure of whatever is contained within that genus, both Cajetan² and John of St. Thomas³ hold that discrete

1. *Curs. theol.*, t.2, disp.10, a.3, p.98, n.2.

2. "Multiplicatio autem temporis discreti in pluribus angelis aut in eodem, iudicio meo, non est necessaria nisi materialiter: quemadmodum etiam tempus continuum quo nostra mensurantur, materialiter multiplicatur in omnibus mobilibus, et aevum in omnibus aeviternis. Consensum namque rationi videtur ut, sicut omnia aeviterna simplicissimo aevum mensurantur, quod solum est aevum formaliter; ita omnis operatio huiusmodi simplicissima operatione, seu simplicissimo *tempore* mensuretur; et similiter omnis successio operationum, simplicissima successione. Talis autem operatio et successio est ea quae in primo operante temporaliter invenitur: quoniam constat esse supremum angelum, in quo, ut dicitur, est etiam aevum. Et quia operationes intellectus sunt naturaliter priores et simplices operationibus voluntatis, erit unum tempus omnium huiusmodi temporalium; quod est primo mensura operationum succedentium in intellectu primi angeli, et ex consequenti et extrinsece mensura ceterarum operationum tam suarum quam aliorum spiritualium."—*In Iam.* q.10, a.5.

3. "Viliorum respondetur... dari unum tempus discretum formaliter, quod subiective est in supremo Angelo magis ordinate et regulariter operante, sicut nostrum tempus est in motu caeli."—*Op. cit.*, disp.10, a.3, p.98, n.4.

time, taken formally, must be identified with that of the highest angel. We might add by way of corollary that (just as in the case of the aevum) this is wholly to the advantage of the lower angels, for it means that the lower angel can introduce a more perfect order and rhythm in his thoughts and actions and thus participate in a higher mode of life.

The succession and discreteness of angelic operations differ not only according to numerical multiplicity but more profoundly according to the mode of enduring. It is precisely from this mode that the measure is taken. No matter how long or how briefly the highest angel chooses to concentrate upon one species, the regularity of his operation is the measure of the regularity of the operations of all the inferior angels.

At this point we must examine more closely the nature of this regularity. We must distinguish two types of regularity: a material or mechanical one, such as the regularity of a straight line, of an equilateral triangle, of a circle, of a uniform local movement, of a clock; but there is also a formal or virtual regularity, such as the heterogeneous regularity of a living body or of a musical composition. The latter kind would be quite irregular when expressed in terms of the former and vice versa. The permanence and succession of discrete time are obviously of the latter type, and hence compatible with a great deal of freedom.

But the term "freedom" is quite ambiguous and calls for further precision. Let us consider the various ways in which the discrete-time operations of the angels may be called free. In the first place, the angelic intellect is, as it were, loose and free from its various species; it is not fixed or restricted to one species. The abundance of his intelligible universe requires detachment from any given species. This freedom finds its expression in the successive transition from one act to the next. In other words, the production of discrete time is an expression of the detachment and freedom of the angelic intellect which serve his pursuit of greater vision.

Furthermore, no created means of knowing, however numerous, can be considered wholly adequate to the knowable universe. It would seem, likewise, that no given rigorous order of intelligible species could be commensurate with their possibilities. It seems fitting, therefore, that the angel be allowed and able to establish different degrees of permanence and varying orders of succession in his consideration, which permit him to survey his intelligible universe from different points of view.

We presume that apart from the purely intellectual freedom just mentioned the angel uses his free will with regard to the species and their order, just as in contemplation we may choose to consider now this question, now that. This use of free will, as well as its application to purely practical matters, raises a difficulty. For in what sense may an operation, freely performed and freely protracted, be called regular and uniform? Furthermore, since the operations of the highest angel are the prime measure and

discrete time of the operations of all the lower angels, how can the required regularity be reconciled with such freedom? John of St. Thomas expresses the latter difficulty in the following terms:

...It seems that in no way can there be one discrete time as there is one continuous time with us. First, if there is one discrete time, it must be because all durations of spiritual operations can be reduced to a supreme uniformity in operation. In what this consists, however, cannot be explained, especially because, these actions being free, they have nothing fixed or stable as to uniformity, since the superior angel can have now more, now fewer operations, while the inferior has only one or vice versa. Therefore the nature of measure cannot be founded on one more than on the other.¹

The answer to this difficulty is that the uniformity which makes the operations of the higher angel the measure of all the lower angels is not taken from the objects he considers, nor from the freely chosen length of a single consideration, nor from the particular order of succession he chooses to follow, but from the regularity with which he performs whatever he performs, a regularity which consists in the perfection of the mode in which he thinks or wills whatever he thinks or wills. This perfection actually shines forth in any single operation or series of operations. It is this mode, inseparable from any one of his operations and consistently expressed in each, which unceasingly serves as a norm for the operations of the lower angels.

Perhaps we may suggest a metaphor to illustrate the manner in which the regularity of the thoughts and actions of the higher angel introduces greater regularity in those of the lower, by comparing the relation between them to the one which exists between the composer and the listener. Music is an imitation of the movement of human passions and character as expressed by the intonations of the voice. In listening and applying himself to the more orderly and pleasing expression of the movement of a given passion, the listener is both free from mere passivity and has a better understanding of his own physical passion of joy or of sorrow. The music thus accomplishes what Aristotle called a *catarsis*.² The lower angel, too, by ordering his thought and action in conformity with a higher regularity is purged, as it were, of the relative confusion which would be his were he to confine himself to the innate uniformity of his operations.

The second objection against the unity of discrete time is taken from the doctrine that the free action of one angel is known to another only if the former wishes to make it known. Here is how John of St. Thomas states this difficulty:

Because the free actions of the superior angel are not known to the inferior, nor conversely, except in so far as either wills to make them known, they do not serve as measure, which ought to be more known than the thing measured. If, however, free action is made known in an effect, such an effect does not found the measure of discrete time because in some instances such an effect is always measured by our time, as the movement of the heaven is the effect of the operation of the angel, and nevertheless belongs to ours, not to discrete time.³

To this objection he answers

...that the free operations of the superior angel (although they are secret in so far as they are free, as are also the free operations of the inferior angel), are nevertheless manifestable, and in fact many of them are manifested by illumination, by speech and by other hierarchical actions, in which the very mode of proceeding of the superior angel is shown to be more uniform and simple. And because in heaven there is never lacking some "influx" from the superior angels to the inferior because: *The stream of the river maketh the city of God joyful* (Ps. 45:5), therefore, there never fails to be an operation made known by the influx from the superior to the inferior wherein is clearly seen the notion of discrete time.¹

This reply leaves many difficulties unsolved. It would seem to imply that the highest angel never ceases to perform some thought or action which is manifest to all the lower angels. Thus we might ask if in order to be the discrete time, the transient operations of the highest angel must unceasingly be manifested to the lower. If such is the case, then the highest angel must always have some thought or action manifested to the lower without any interruption. Yet, since even the highest angel cannot simultaneously use two species, it seems that the necessity of an uninterrupted mensuration of the inferiors would destroy his freedom to keep his thought or will to himself.

John of St. Thomas does not mention this difficulty. Perhaps it arises from our lack of penetration. Yet, whatever the reason may be, the difficulty is avoided by his use of the plural: *Angeli superiores*. Now it is quite true that "an influx from the superior to the inferior angels is never lacking,"² but since we identify discrete time, taken formally, with the uniformity not of just any higher angel, but of the angel whose operations are the most uniform, this reply does not answer our difficulty.

On the supposition that our difficulty is reasonable (we are not at all certain that it is) we might approach a solution by suggesting further questions. This venture could have at least the merit of offering a clue to our own misunderstanding. Since even the highest angel can use but one species at a time, does he cease to illuminate other angels when he speaks to a particular one? And ceasing to illuminate them, does he cease to measure them? Or, in regard to the lower angels, if they converse with an angel other than the highest, and hence are not attending to the thought of the highest angel, do they cease to be measured by it?

We have already pointed out that it is because of the uniformity of the mode in which the superior angel proceeds in his thoughts and actions, and not precisely because of the object he considers, that he measures the operations of the inferior angels. A possible solution to the difficulty may lie in the fact that the inferior angel can know the mode according to which the higher proceeds without knowing or attending to the content of his thought. Indeed, in order to be the measure of all the variable operations of all the inferior angels the higher must *ever* be their measure. Yet, does this require the express and unceasing attention of these inferiors? The

1. *Curs. theol.*, t.2, d.10, a.3, p.98, n.3.

2. *Politics*, VIII, c.7, 1341b38. Compare with *Poetics*, c.6, 1449b28.

3. *Loc. cit.*

1. *Op. cit.*, p.99, n.6.

2. *Ibid.*, n.6.

regularity is always there, but does it have to be always and incessantly considered, in *actu signato*, as it were? It seems not, for while we live by the clock and thus introduce an order in our actions of the day, we do not have to keep our eyes fixed on the clock. In fact, if the lower angel had to attend to the measure in such a fashion, only the operation of the highest angel could ever be the main object of his attention.

Let us now turn to the main subject of this note suggested by the following passage (which is from a reply to an objection) to which reference was made at the beginning:

... This greater regularity is found in the operations of the superior angel, because the operations of the superior angel are less multiplied and each of them can consume more of our time and correspond to it (for where there is less multiplicity there is greater uniformity because confusion and a lack of uniformity arise from a multitude less ordered) but also regularity is expected in the order in proceeding from one operation to the other and from one object to the other, for since the superior angel perceives many notions in an object, he proceeds in it less confusedly and passes from it to another with greater order and uniformity. The inferior angel proceeds with less order and less uniformity because he has a more confused understanding of these objects. This is especially true of the fallen angels who proceed in those things which pertain to their end in a less orderly fashion. Whence St. Thomas (II Sent., d.9, q.1, a.2, ad 2), following Dionysius (*Caelst. Hier.*, cc.3, 7; PG 3, 165, 209) teaches that the superior angels dispel the confusion and nescience of the inferior angels by illuminating them with a higher light so that they understand more things to which they have been in potency and which, consequently, they understood only confusedly. Thus, by proceeding in a connatural mode, the superior angels always proceed in a more uniform mode. And although while they have one operation the inferior angels have many, because a single operation belongs to the measure of discrete time as a part of it, so it measures by reason of it in reference to another operation, just as in our time its parts are not present except by reason of the instant and thus these parts measure with reference to the others.¹

As we have already pointed out, the multiplicity of intelligible species and the dispersion of the means of knowing make for a certain confusion and lack of formal regularity. To this scattering of the means of knowing and to the ensuing division of thought, we may apply the expression used by St. Thomas in the article referred to by John of St. Thomas: "dissimilitudo confusio." As the latter shows in the above quotation, the lower angel may be purged of this confusion in being measured by the greater uniformity of the operation of the higher, and thus proceed more *ordinate* in his thoughts. We have also pointed out that any single thought of the higher angel (we mean of course a variable operation) may measure the succession of operations to which the lower angel must have recourse in order to cover the same field. In this particular case a succession corresponds to an indivisible permanence. The latter measures the former. The measure reduces to greater unity whatever multiplicity there may be on the part of the measured. In what does this unity consist? The multiplicity of the species and of the acts is not reduced. Hence the unity established in these acts is a peculiar unity, an orderliness due properly to the extrinsic higher measure. The succession imitates the unity and uniformity of the measure by proceeding according to a certain order and temporal rhythm, thus approaching through the quasi-dynamic and rhythmic unity

of succession the indivisible and uniform permanence of the higher mode of operation. We say "quasi-dynamic" since this succession is not movement proper; yet, it has something of dynamism in that it implies a transition from one thought to the next, as well as formal unity in the very series of the transitions, this orderly whole being somehow drawn together and contained by the measure. It seems then that the rapture of the operation of the lower angel by the formal regularity of the higher is inseparable from tempo. The uniformity of the higher is in concentration is imitated by a particular tempo, binding and ordering the manifold steps into unison. There is no novelty on the part of the known: the innovation consists entirely in the mode of reaching the objects.

Now the same will apply to the succession of operations of the lower angel when it imitates the more intense and orderly succession of operations of the higher. The lower will be enraptured by the more perfect tempo of the higher angel's succession of thoughts. The tempo of discrete time thus seems to be the binding power which unifies in descending and ascending movement the variable operations of the entire angelic order. It forms, as it were, the bed of the *fluminis impetus (qui) laetificat civitatem Dei*.¹

The finite intellect, when we consider it as confined to its created means of knowing, can achieve greater perfection of variable thought only by a unification of its succession under a higher measure. We believe that we have shown that it is not enough to consider the mere succession of the intellect's operations as the means of bringing within its reach the fullness of its intelligible universe and of exercising its thought to the limit. The mere succession is not enough. The mode of the succession is essential to its perfection. Nor is the innate mode sufficient. The broader grasp and the more penetrating intensity can be achieved not merely through an increase of succession but by the imitation of a higher mode in the succession. And this mode consists not in a purely material regulation and rhythm, but in a formal, heterogeneous uniformity which we believe to be expressed sufficiently by the word tempo.

Fluminis impetus laetificat civitatem Dei—the eternal, wholly undivided activity of divine thought is like the source of the river from which flows the angelic participation. As the inferior angels imitate and follow the more uniform regularity of the higher angels, a rhythm is infused into this constant flow. It is to this rhythm and tempo that we may apply the words of St. Augustine: *Deus movet creaturam spirituum per tempus*.² This rhythm is manifestly not the material regularity we mentioned before; it is the lower angels to establish greater conformity and regularity in their life of light and of love.

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1. JOHN OF ST. THOMAS, *op. cit.*, n.5.

1. Ps., XLV, 5.

2. *De Genesi ad litteram*, VIII, c.20, n.39; PL 34, 388.