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Oliva Blanchette

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The Four Causes as Texture of the Universe

The universe is constituted by a plurality and diversity of beings unified, not as one thing but as an order of things. But whoever speaks of an order implies a principle for that order, for many things cannot be situated in an order without reference to a first, a *principium*. One thing is said to come "before" the other, to be prior, because it is seen as closer to a "principle," whatever that principle may be, material or spiritual, ideal or real. Conversely also, whoever speaks of a principle implies an order. As St. Thomas Aquinas puts it, "Principium ordinem quemdam importat."¹ This also holds true whether one is a materialist or a spiritualist, an idealist or a realist, for one does not speak of a "principle," a beginning, except with reference to what comes "after."

Thus, when a theologian speaks of the universe, he inevitably includes, explicitly or implicitly, a reference to God, the principle and the end of *the* universe, the totality of created beings, and he exercises his judgment with reference to this Principle and End. But for the theologian that was St. Thomas, even though this was the highest wisdom, it was not the only wisdom. "Est enim duplex sapientia: scilicet mundana, quae dicitur *philosophia*, quae considerat causas inferiores, scilicet causas causatas, et secundum eas iudicat; et divina, quae dicitur *theologia*, quae considerat causas superiores, id est divinas, secundum quas iudicat."² More often than not when St. Thomas spoke of the universe, he spoke of it in relation to the divine causes, to the divine attributes, as he goes on to say in the text, such as the divine wisdom, goodness and will, *et huiusmodi*. But this did not keep him from exercising the mundane wisdom which he learned with the help of the Philosopher, at least to the degree that he found it useful for manifesting what was said in the divine wisdom. For, though St. Thomas never practiced the physical sciences or the philosophy of nature even as much as St. Albert and others of his day did, still as a theologian he showed a marked propensity for appealing to our experience and our understanding of the world in his theological discussions, not to mention the analysis of this experience and understanding which he carried on himself as he was commenting on the Philosopher.

1. *In V Metaph.*, lect.1, n.751. We quote St. Thomas according to the Marietti manual editions.

2. *De Pot.*, q.1, a.4, c.

Everyone knows the frame of reference within which St. Thomas carried on this reflexion. It was that of the four causes as formulated by Aristotle. Order, for him, was not only something which came and returned to God, but it permeated everything in the universe, and the causes for this order were no less pervasive. "Ordo effectuum debet respondere ordini causarum."¹ There are mediate and proximate or immediate causes as well as ultimate causes operating in the universe, and St. Thomas was far from blind to these. In fact, according to a very pregnant phrase of his, these immanent causes are the very texture of the universe. *Ordine et connexione causarum contexitur.*² Order and causality are interwoven as the very fabric of the universe.

Every cause is a principle of one kind or another. Hence every cause somehow implies an order. "A qualibet causa derivatur aliquis ordo in suos effectus, cum quaelibet causa habeat rationem principii; et ideo secundum multiplicationem causarum multiplicantur et ordines, quorum unus continetur sub altero, sicut et causa continetur sub causa."³ It is a diversity in causes that gives rise to a diversity of orders within the universe, and this diversity of causes must be viewed in more ways than one. There is the diversity as determined through the division of the four causes, material, formal, agent and final, and within any one of these four lines of causality there is the diversity of the more immediate and the less immediate, the more particular and the more universal. But still all this diversity must have order, if it is to be the texture of the universe. "Nomen causae ordinem quemdam importat et in causis ordo ad invicem invenitur."⁴ All four causes together, at their diverse levels, constitute the order of the universe, just as all four together can be cause *per se* of one and the same thing, one being prior to the other in one way or another.⁵

What we wish to study here is not so much the way in which St. Thomas represented to himself this texture of the causes in the universe. This was done largely in the *Weltanschauung* of Aristotelian cosmology, as everyone knows. What we wish to do is rather to bring out the intellectual texture that underlies this *Weltanschauung* as St. Thomas adopted it for himself. This is something which was not only supposed in many of his discussions as a theologian, but it was also prior to the representation that was taken for granted in the science of the day, that is, somehow independent of it, though not expressed without it, so that it might be viewed as not entirely irrelevant to our own representation of the cosmos today. The question we are asking,

1. *De Ver.*, q.5, a.9, ad 7.

2. *Ibid.*, q.11, a.1, c.

3. *Ia*, q.105, a.6, c.

4. *In De Causis*, lect.1, n.10.

5. Cf. *In II Phys.*, lect.5, n.182.

then, is how do the four causes taken together account for the order of the universe as St. Thomas, following Aristotle, understood it. The same principles are found in all things *secundum proportionem*.¹ The bond that holds them together is also the bond that makes the order of the universe. How is this bond to be understood?

I. MATTER AND FORM

Let us begin with the intrinsic causes. Two important errors that compromised the order of the universe in the eyes of St. Thomas started from a misconception of these two causes. First, there was excessive extrinsicism which maintained that all sensible forms came from outside of nature, from a separate substance, a *dator formarum* or an agent intellect, and that natural agents here below only prepared matter to receive the forms. The other error was the opposite of this, excessive intrinsicism, which maintained that all forms were already in things, hidden but actually there, and needed no exterior cause but only some exterior action to make them manifest.²

The first of these positions is erroneous because it fails to recognize the role of proximate causes in what takes place in the world of nature. For St. Thomas this amounted to nothing less than denying the order of the universe.

Prima enim opinio excludit causas propinquas, dum effectus omnes in inferioribus provenientes, solis causis primis attribuit; in quo derogatur ordini universi, qui ordine et connexione causarum contextitur: dum prima causa ex eminentia bonitatis suae rebus aliis confert non solum quod sint, sed etiam quod causae sint.³

At first glance, the second position may seem to safeguard the order in nature by hiding the forms in the sensible things themselves, but actually it still attributed only a semblance of causality to the things of nature.

Secunda etiam opinio in idem quasi inconueniens redit: cum enim removens prohibens non sit nisi movens per accidens, ut dicitur *VIII Phys.*; si inferiora agentia nihil aliud agunt quam producere de occulto in manifestum, removendo impedimenta, quibus formae et habitus virtutum et scientiarum occultantur: sequitur quod omnia inferiora agentia non agant nisi per accidens.⁴

1. Cf. *In XII Metaph.*, lect. 4.

2. *De Ver.*, q. 11, a. 1, c. describes these two positions in most general terms. In other places St. Thomas presents them with greater historical nuance and detail, and he identifies them, in one form or another, with different philosophers. The general statement of the positions is enough for our purposes here.

3. *Ibid.*

4. *Ibid.*

If there is only *per accidens* activity in sensible nature, that means that there is also only *per accidens* order and no *per se* order. The hidden forms of excessive intrinsicism lacked what was essential to formal diversity in nature.

The root of these errors lay deeper than the order of agent causality. *De Potentia*¹ brings it back to a misunderstanding of both material and formal causality. Intrinsicism failed to distinguish act and potency, as if everything that came to be had to pre-exist in act. It has to pre-exist in potency only and not in act, for if it did not pre-exist in potency, it would come *ex nihilo*, something that requires more than a natural agent; if it pre-existed in act, it would not come to be, for what is (in act) does not come to be.²

All this amounts to missing the point of material causality: *ignorabatur natura materiae*. Matter is cause of sensible things because it contains a plurality of forms in potency. It can be subject now to one form, now to another and so on. While it is subject to one form, it is in potency to others; it can become the subject of other forms. This possibility, taken by itself, may give rise only to chance or a very loose sort of order, *per accidens* order, but this kind of order has a place in the perfection of the universe. "Res autem creata suam perfectionem non possidet in uno, sed in multis."³ Matter is principle of multiplicity, as form is principle of diversity as regards species. "Specierum autem distinctio est a forma: singularium autem eiusdem speciei a materia."⁴ To be sure, what matter brings to order is minimal: it is less than any of the other causes and can be understood only in relation to them. But what it does bring is a condition for the preservation of the species and hence for the preservation of the *per se* order which obtains between the species.

Extrinsicism, on the other hand, missed the point of formal causality: *ignorabatur natura formae*, as if it were a form that came and so it postulated an agent above nature to produce such a form. What comes to be in the proper sense is a composite and not a form alone, just as what exists in nature is not a form alone but a form in matter. "Res enim naturalis generata dicitur esse per se et proprie, quasi habens esse, et in suo esse subsistens; forma autem non sic esse dicitur, cum non subsistat, nec per se esse habeat."⁵ If it is not the form which comes to be properly but the composite, there is nothing to prevent us from saying that substantial forms are produced by natural agents, for what is produced will not be *ex nihilo* but *ex materia*. A

1. Q.3, a.8.

2. *De Pot.*, q.3, a.8, c.: A.

3. *Cont. Gent.*, III, c.20, n.2014.

4. *Ibid.*, II, c.39, n.1153.

5. *De Pot.*, q.3, a.8, c.

form without a subject would be *ex nihilo*; but a composite comes from matter, its form being educed from the potency of matter.

Not only is this possible, but it is a necessary inference from experience. It is understood that every effect is like its cause: *omne agens agit sibi simile*. For Plato or in any doctrine of extrinsicism this means that a form found in nature came directly from a prototype, a form existing by itself apart from matter. But for Aristotle and St. Thomas, since for them it was the composite that came to be properly and not the form alone, it meant that the agent also had to be a composite, a thing of sensible nature.

Omne autem agens agit sibi simile; unde oportet quod id quod est faciens res naturales actu existere per generationem, sit compositum, non forma sine materia, hoc est substantia separata.¹

Experience itself made this inference necessary, for it was evident that there was always a similitude between a natural agent and its effect. "Non requireretur similitudo secundum formam substantialem in agente naturali, nisi forma substantialis geniti esset per actionem agentis."²

Form thus appears as both principle of being and principle of activity. In the thing generated the form is "id per cuius acquisitionem aliquid dicitur fieri," and in the thing generating it is "id quo generat," not a *quod* existing by itself but a form existing in this matter, in these bones and in this flesh.

Ut sic sicut factum est compositum, quo autem fit, est forma in materia in actum reducta; ita generans sit compositum, non forma tantum; sed forma sit quo generat: forma, inquam, in hac materia existens, sicut in his carnibus et in his ossibus et in aliis huiusmodi.³

This is true of all purely natural activity. For voluntary activity, something more than the substantial form will come into play, but it will be a form nevertheless, the form conceived in the mind of the agent. The difference between the two kinds of forms is that the intentional forms, as the second are called, come from the agent himself, whereas natural forms can come only from an extrinsic agent inasmuch as all activity presupposes nature.

II. THE EFFICIENT CAUSE

Form as principle of activity brings us to the consideration of the extrinsic causes, efficient and final. We do not refer here to causes extrinsic to the universe as a whole, to the divine wisdom and power

1. *Ibid.*, q.6, a.3, c.: B.

2. *Ibid.*, q.3, a.8, c.

3. *Ibid.*, in fine.

or to the divine goodness, but to causes in the universe that are extrinsic to their effects. We have already spoken of efficient causes to a certain extent in dealing with the intrinsic causes, but we have still to consider them in themselves. The manner of efficient causality in nature follows from the nature of the relation between matter and form. That is why St. Thomas is careful always to define this relation properly. "Et fit quidem ex materia, in quantum materia est in potentia ad ipsum compositum, per hoc quod est in potentia ad formam. Et sic non proprie dicitur quod forma fit in materia, sed magis quod de materiae potentia educatur."¹ "Formae non imprimuntur in materiam ab aliqua substantia separata, sed reducuntur in actum de potentia materiae per actionem formae in materia existentis."² We do not surpass extrinsicism simply by saying that form is in matter; we have to understand that form is educed from the potency of matter. This is the point that distinguishes Aristotle from Plato in the last analysis.

Quia Platonici et Avicenna non ponebant formas de potentia materiae educi, ideo cogebantur dicere quod agentia naturalia disponebant tantum materiam; inductio autem formae erat a principio separato. Si autem ponamus formas substantiales educi de potentia materiae, secundum sententiam Aristotelis, agentia naturalia non solum erunt causae dispositionum materiae, sed etiam formarum substantialium; quantum ad hoc dumtaxat quod de potentia educuntur in actum.³

St. Thomas distinguishes three kinds of efficient causes: the *causa disponens materiam*, the *causa consilians sive praecipiens* and the *causa perficiens*. The second belongs only in the realm of voluntary activity and is analogous to disposing cause in natural activity. But only the third, which can be either natural or voluntary, is truly cause in the proper sense: "haec proprie et vere causa dicitur quia causa est ad quam sequitur effectus. Ad actionem autem perficientis statim effectus sequitur, non autem ad actionem disponentis vel consulentis vel imperantis."⁴ Neither extrinsicism nor intrinsicism arrived at the *causa perficiens*, for failing to see that forms were educed from the potency of matter and that matter contained the forms in potency.

III. THE UNIVERSAL MODE OF CAUSALITY

The objection to excessive extrinsicism, however, concerned more what it failed to consider and not so much what it said. What it said, as a matter of fact, contained an important element of truth, for,

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1. *De Pot.*, q.3, a.8, c.
 2. *Ibid.*, q.6, a.3, c.: B.
 3. *Ibid.*, q.5, a. 1, ad 5.
 4. *De Malo*, q.3, a.3, c.

while it failed to do justice to the activity of natural agents, it did affirm a superior mode of causality above the mode found in the things of nature. In the mind of St. Thomas this higher mode was as much a discovery of Plato as of Aristotle, though each understood it in a different way.¹

The difference between the two modes of causality has to be understood in two different ways that are closely interrelated. The first of these brings out that one mode of causality takes the way of motion and change while the other does not. "Duplex (est) modus productionis rerum: unus quidem secundum mutationem et motum; alius autem absque mutatione et motu."² Natural agents can be truly the causes of things other than themselves but only in a particular way, namely, by the transformation of matter. They dispose matter to receive different forms and they educe the forms from the potency of matter.

Sic igitur huiusmodi inferiora agentia corporalia, non sunt formarum principia in rebus factis, nisi quantum potest se extendere causalitas transmutationis, cum non agant nisi transmutando, ut dictum est; hoc autem est in quantum disponunt materiam, et educunt formam de potentia materiae.³

The being of a form in matter, however, does not imply motion or change, except perhaps *per accidens*. Hence, since every body acts only in as much as it is moved, there has to be a superior principle from which the form as such depends, an incorporeal principle.

Cum autem esse formae in materia, per se loquendo, nullum motum vel mutationem implicet, nisi forte per accidens; omne autem corpus non agat nisi motum, ut Philosophus probat, necesse est quod principium ex quo per se dependet forma, sit aliquod principium incorporeum; per actionem enim alicuius principii dependet effectus a causa agente.⁴

Thus, above the *fieri* of natural things, which consists in transmutation of forms in matter, another origin of things has to be understood, another mode of causality, as both Plato and Aristotle held.⁵

The second way in which the two modes of causality have to be understood and distinguished will help to clarify and justify the first. This one brings out that one mode involves only particular causality, whereas the other brings universal causality into play. "Manifestum est autem quod omnis causa per motum aliquid faciens, particularis

1. This is especially evident in the *De Subst. Sep.*, written in the latter part of his life, but it also appears quite clearly in the *De Pot.*, written somewhat earlier.

2. *De Subst. Sep.*, c.10, n.103.

3. *De Pot.*, q.5, a.1, c.

4. *Ibid.*

5. Cf. *De Subst. Sep.*, c.9, n.94.

causa est, habet enim particularem effectum; est enim omnis motus ex hoc determinato in illud determinatum, omnisque mutatio motus cuiusdam terminus est.”¹ Things do not move in general, but one thing moves another and is moved by another. This body acts upon that one. This horse generates that one. This man generates that one. But is the particular cause the cause of the form or of the nature as such in the thing of which it is cause? This cannot be, for the individual would be cause of the species and hence of himself, which does not make sense.

Nullum particulare agens univocum potest esse simpliciter causa speciei: sicut hic homo non potest esse causa speciei humanae; esset enim causa omnis hominis, et per consequens sui ipsius, quod est impossibile. Est autem causa hic homo huius hominis, per se loquendo. Hic autem homo est per hoc quod natura humana est in hac materia, quae est individuationis principium. Hic igitur homo non est causa hominis nisi in quantum est causa quod forma humana fiat in hac materia. Hoc autem est esse principium generationis huius hominis. Patet ergo quod nec hic homo, nec aliud agens univocum in natura, est causa nisi generationis huius vel illius rei.²

If the individual is *per se* cause only of the individual, if, as St. Thomas says elsewhere, he does not produce the nature absolutely but only applies it to a determinate matter,³ there has to be a *per se* cause of the nature as such. What happens regularly in nature, either always or in most cases, has to be explained by some agent cause. “Oportet autem ipsius speciei humanae esse aliquam *per se* causam agentem: quod ipsius compositio ostendit, et ordinatio partium, quae eodem modo se habet in omnibus, nisi *per accidens* impediatur. Et eadem ratio est de omnibus aliis speciebus rerum naturalium.”⁴

There is, in fact, only a *per accidens* connection between an individual cause and the form of the thing it produces.

Est autem aliquod efficiens a quo forma rei factae non dependet *per se* et secundum rationem formae, sed solum *per accidens*: sicut forma ignis generati ab igne generante, *per se* quidem, et secundum rationem suae speciei non dependet, cum in ordine rerum eundem gradum teneat, nec forma ignis aliter sit in generato quam in generante; sed distinguitur ab ea solum divisione materiali, prout scilicet est in alia materia.⁵

The connection between this fire which is generated and that fire which generates is not *per accidens*, if we consider only the individuality of the fires; that fire is *per se* cause of this fire. But the order

1. *Ibid.*, n.95.

2. *Cont. Gent.*, III, c.65, n.2400.

3. *Ia*, q.45, a.5, ad 1.

4. *Cont. Gent.*, III, c.65, n.2400.

5. *De Pot.*, q.5, a.1, c.

between two things that belong to the same species is not *per se* order, and the form of the species does not depend upon any one of the individuals that participate in the species. The individual that generates only brings it about that the form is educed from the potency of another matter. Hence, the form of the thing generated has to have a cause *per se* beyond the individual. "Unde cum igni generato sua forma sit ab aliqua causa, oportet ipsam formam dependere ab altiori principio, quod sit causa ipsius formae per se et secundum propriam speciei rationem."¹ Thus we arrive at a universal cause, not only to explain the origin of a specific form, a cause of the thing generating as well as of the thing generated, but also to explain how more than one thing can participate in the same form. Matter alone cannot explain this, because matter is principle of multiplicity but not of similitude of form. Only a principle above the individual forms will explain this similitude.

This last argument leads us to suppose that there might be different degrees of universal causes according to different degrees of perfection in reality. But this must be understood in the light of the first argument as well. According to St. Thomas, there is only one strictly universal cause, the cause which acts *absque mutatione et motu* and which is the source of all being. Natural agents produce things that somehow preexist and are determined to be one thing or another, such as fire, or white, or something else of the same nature; they act by moving and so require matter to be subject of the change; hence they do not produce *ex nihilo*.² Creation, however, is *ex nihilo*, and it is the source of absolutely everything, the universal cause *par excellence*.³ This universal power belongs to God and to God alone. It is absolutely incommunicable to any creature, so much so that nothing can participate in the act of creation, not even as an instrumental or an intermediate cause, since there is absolutely nothing prior to this kind of cause to be disposed through the action of an instrumental cause.⁴ It was the error of Avicenna, of the author of the *Liber De Causis*, of Proclus and of every form of Neo-Platonic emanationism not to have understood that there could be no mediation in the production of things according to their being, that everything that is must be referred directly to the Creator as *per se* cause of its being.⁵

1. *Ibid.*

2. Cf. *De Pot.*, q.3, aa.1 and 2: *Cont. Gent.*, II, cc.17 and 43.

3. *Ia*, q.45, aa.1 and 2: *Cont. Gent.*, II, c.16.

4. *De Pot.*, q.3, a.4: *Ia*, q.45, a.5.

5. *Ia*, q.44, a.2, c.: *De Subst., Sep.*, c.10; *In De Causis*, lect.3 and 9. It is interesting to note that in commenting on the *Liber De Causis* St. Thomas tended to give a more favorable interpretation to the text and to certain Platonic positions than is sometimes suggested in references found in other works: "... quidam male intelligentes existimaverunt velle auctorem istius libri quod Intelligentiae essent creatrices substantiae Animarum. Sed hoc est contra positiones platonicas ... Platonici ponebant quod id quod est ipsum esse est

How, then, can there be universal causes other than God? "Universalitas enim causalitatis propria est Deo."¹ It will be noted that the arguments for the existence of universal causes summarized above started from the production of things through change and motion. If we push the argument far enough, we eventually get to the question of being, to what is common in the term of any becoming whatsoever. But with this question we arrive at a level that transcends all motion and change. "Oportet igitur originem quandam in rebus considerari, secundum quam ipsum esse communiter sumptum per se attribuitur rebus, quod omnem mutationem et motum transcendat."² Against Avicenna, the *De Substantiis Separatis* insists that mediation is possible where production takes place through motion and change, and only under the aspect of motion and change. In commenting the first proposition of the *Liber De Causis*, a passage which is a source for a good deal of his thinking on the order of causes, as many allusions in the *De Potentia* indicate, St. Thomas points out that the efficient causes we know produce forms but not matter. "Causae efficientes quae sunt apud nos non producunt materiam sed formam."³

It is the first cause that produces prime matter, and all second causes, universal as well as particular, presuppose matter to which they add dispositions that make it proper for different things. "Unde id quod primo subsistit in tota natura est a prima omnium Causa, quod appropriatur singulis rebus officio secundarum causarum."⁴ This "appropriation" of matter, of course, is realized through change and motion, where matter is disposed and form is educed from the potency of matter. Sometimes it is also spoken of as information, "Quia illud quod posterius advenit, se habet ad id quod praesupponebatur, per modum formae."⁵

A secondary universal cause is not simply universal. It is both universal and particular at the same time but in different respects. St. Thomas's use of "particular" here is not unlike that of Hegel

causa existendi omnibus" (lect.3, n.80). In this they did not err, but they erred only in positing an order of separate causes that made the unity of natural substances inconceivable: "... ponentes huiusmodi ordinem causarum separatarum secundum ea quae de individuus praedicantur, quod sequitur quod Socrates erit multa animalia, scilicet ipse Socrates et homo separatus et etiam animal separatum . . ." (n.83). Lect. 9 also interprets the text of the *Liber De Causis*, and Proclus as well, in an acceptable sense. In the end Avicenna alone seems to remain irreconcilable on this score, and he is the prototype, the one whom St. Thomas thinks of as the philosopher from whom certain theologians seem to have gotten the idea that mediation and instrumentality was possible in the act of creation. Cf. *Ia*, q.45, a.5, c.

1. *In De Causis*, lect.19, n.352.
2. *De Subst. Sep.*, c.9, n.96.
3. *In De Causis*, lect.1, n.36.
4. *Ibid.*, n.38.
5. *Ibid.*, lect.18, n.345.

who thinks of it as the intermediate between the universal and the singular. The secondary universal cause is particular, as a cause, inasmuch as it reaches only one genus of things; but it is universal inasmuch as it extends to everything in that genus and not merely to this or that species. St. Thomas illustrates this in connection with the genus of things that are subject to change and motion.

Causa autem secundi gradus est quodammodo universalis, et quodammodo particularis. Particularis quidem, quia se extendit ad aliquod genus entium determinatum, scilicet ad ea quae per motum in esse producuntur; est enim causa movens et mota. Universalis autem, quia non ad unam tantum speciem mobilium se extendit causalitas eius, sed ad omnia, quae alterantur et generantur et corrumpuntur: illud enim quod est primo motum, oportet esse causam omnium consequenter mobilium.¹

For St. Thomas, as for Aristotle, the first motion, cause of all other motions, was the circular motion of the heavenly spheres. Prescinding from Aristotle's reasons for fixing precisely upon the heavenly bodies as the universal causes in nature, let us try to weigh the reasons for seeking such causes.

We have just seen the general lines of St. Thomas's approach to the question. The heart of the question revolved about how to explain the coming to be of a species as not identifiable with either this or that individual of the species. Peter, Paul and John are men. Man thus comes to be in Peter when Peter comes to be, and in Paul when Paul comes to be, and in John when John comes to be. And any man comes to be according to a process, according to an order of nature. The coming to be of man thus appears as a *per se* effect for which there has to be a *per se* cause. In the *De Substantiis Separatis*,² St. Thomas uses the example of a horse. When the individual of a species is generated, the progenitor, also an individual of the same species, is cause *per se* that the specific nature comes to be in this individual but not of the nature as such, for what is cause of a nature according to the whole species as it is found in the different individuals, is cause of it in all the individuals that are of that species. Since, then, the progenitor himself is of the same species as the progeny, the progenitor would have to be cause of himself. "Relinquitur igitur quod oportet super omnes participantes naturam equinam esse aliquam universalem causam totius speciei."

In the Platonist view such a cause was placed in a species separated from matter, somewhat like the idea of an artist is prior and extrinsic to the material he is working with. But Aristotle sought the universal cause of natural species in the things of nature itself. "Secundum Aristotelem autem hanc universalem causam oportet ponere in aliquo

1. *In VI Metaph.*, lect. 3, n.1208.

2. C.10, n.105.

caelestium corporum: unde et ipse has duas causas distinguens, dixit, quod homo generat hominem, et sol." The Aristotelian position, however, did not exclude the influence of intellectual species as universal causes, since above the celestial bodies there is room for separate intelligences that cause and direct the production of things here below.

Omnes igitur formae quae sunt in istis inferioribus, et omnes motus, derivantur a formis intellectualibus quae sunt in intellectu alicuius substantiae, vel aliquorum. . . . Et quantum ad hoc verificatur dictum Platonis, quod formae separatae sunt principia formarum quae sunt in materia: licet Plato posuerit eas per se subsistentes, et causantes immediate formas sensibilibus; nos vero ponamus eas in intellectu existentes, et causantes formas inferiores per motum caeli."¹

St. Thomas's preference for Aristotle thus did not depend only on the manner of conceiving the separate ideas but also on the fact that Aristotle gave greater importance to the activity of the things of nature, even to the point of finding universal causality there. Aristotle filled a gap which Plato had left in the order of things, a gap which the notion of instrumental causality came to bridge over for St. Thomas. "Corpus igitur caeli non agit ad generationem secundum propriam speciem, sicut agens principale, sed secundum speciem alicuius superioris agentis intellectualis, ad quod se habet corpus caeleste sicut instrumentum ad agens principale."²

IV. THE PARTICULAR MODE OF CAUSALITY

Universal causes, however, do not necessarily dispense with more particular causes. To be sure, God could get along without subordinate causes altogether, but God chose to do otherwise. In answer to an objection claiming that the most perfect cause acts without intermediates, something not too far removed from his own position that an instrumental cause is inconceivable with regard to creation, St. Thomas explains that from the abundance of his goodness God has chosen to communicate to creatures not only being but also the dignity of being causes of goodness for others.³ God is the incorporeal *per se* principle of the form as such, according to the argument we saw above,⁴ but

1. *Cont. Gent.*, III, c.24, n.2047.

2. *Ibid.*, c.23, n.2035.

3. Cf. *Ia*, q.47, a.3, ad 1, according to the text found only in the *codex 138 bibliothecae Casinensis*, as published in the Leonine edition. The authenticity of this whole article seems certain to us, both by reason of its content, which we shall have ample occasion to use in what follows, and by reason of an allusion to it in *Ia*, q.46, a.1, ad 5, clearly recognized as such by Fr. John WRIGHT, *The Order of the Universe in the Theology of St. Thomas Aquinas*, pp.101f, note 125, and Fr. RAMÍREZ, "Doctrina S. Thomae Aquinatis de Bono Communi Immanenti," *Doctor Communis*, XVI (1963), p.44, note 23.

4. P. 65.

there can also be a corporal principle of the same form by the power of the incorporeal principle itself, the corporal principle thus acting as an instrument of the incorporeal principle.¹ The form does not begin to be except in matter, and not any matter can receive any form, since a proper act has to be in its proper matter, and so the corporal agent intervenes to dispose matter properly and even to educe the form from the potency of matter. "Et hoc agit in virtute principii incorporei, et eius actio determinatur ad hanc formam, secundum quod talis forma est in eo, *actu* (sicut in agentibus univocis) vel *virtute* (sicut in agentibus aequivocis)."² Thus the different kinds of causes of nature have their respective roles to play in the generation of things. God does not make the action of natural causes unnecessary, but rather, as the principal cause is the cause of an instrument's action, He is the cause of a true activity in the things of nature. "Quanto enim aliqua causa est altior, tanto est communior et efficacior, et quanto est efficacior, tanto profundius ingreditur in effectum, et de remotiori potentia ipsum reducit in actum."³

The same principle will be seen to apply analogously within the realm of nature. Particular causes have their efficacy from the universal cause, but still the proper and determinate effect is attributed to the particular cause.⁴ Though the higher causes in nature have the most universal powers, the lower recipients of these powers, the *passiva infima*, are not prepared to receive the universal effects immediately; there have to be intermediate powers that are more particular and more contracted. For St. Thomas, this was evident in the order of corporeal things. The heavenly bodies were considered principles of generation of men and of other "perfect animals" but with the mediation of the particular power which was found in the seed. It happened, however, that generation seemed to take place at times *ex putrefactione*, without the mediation of any seed, and hence, as it appeared, *per solam virtutem caelestium corporum*. But this kind of generation gave rise only to "imperfect animals." This could be explained by the way we see sensible things act. When a cause is remote or at a distance, its effect is rather weak; the strong effect requires a cause that is near. A thing can be heated by a fire at a distance, but to set it afire the fire must be brought up next to it. This can be done by a mediate cause, *mediante candela*, according to the homey example of St. Thomas. "Et similiter

1. Note that this does not make the corporal principle an instrument in the order of being as such, where causality is properly creation, but only in the order of becoming. Instrumentality, for St. Thomas, always entails motion. "Instrumentum autem nunquam adhibetur nisi ad causandum aliquid per viam motus: est enim ratio instrumenti quod sit movens motum" (*Cont. Gent.*, II, c.21, n.973). In the way of creation properly speaking, there can be no instrument since there is no motion.

2. *De Pot.*, q.5, a.1, c.

3. *Ibid.*, q.3, a.7, c.

4. Cf. *Ibid.*, q.6, a.9, c.

generatio perfectorum animalium causatur a caelestibus corporibus mediantibus propriis activis; generatio autem animalium imperfectorum immediate."¹

Angels, these separate substances other than God, also have a mediating role to play between God and the lower creatures, but they do not exercise this role independently of the order of nature, even though, as spiritual creatures, they are above nature and not subject to change. They are not *datores formarum*, something that requires a creative power which only God can have; their mediative role as universal causes participating in the government of all corporal creatures is one of administration rather than of creation, unlike what many philosophers have thought concerning separate substances or intelligences.² But still they can be principles of corporal forms, not as giving them simply, but as setting things in motion for their production — “non tanquam influentibus formas, sed tanquam moventibus ad formas.”³ Through their intellectual species, which they have directly from God and which are “quaedam seminales rationes corporalium formarum,”⁴ they could command the local motion of the heavenly spheres and through this, the first and most perfect of motions, influence the course of nature. But this activity is *per modum artis*, making use of the powers of nature itself, reaching its particular effects through the mechanism of universal and particular causes operative in nature.⁵

If we look at it from the angle of the particular thing, the same subordination of causes appears, the same coordination of universal and particular causes under the absolutely universal causality of God.

In qualibet autem re naturali invenimus quod est ens et quod est res naturalis, et quod est talis vel talis naturae. Quorum *primum* est commune omnibus entibus; *secundum* omnibus rebus naturalibus; *tertium* in una specie; et *quartum*, si addamus accidentia, est proprium huic individuo. Hoc ergo individuum agendo non potest constituere aliud in simili specie nisi prout est instrumentum illius causae, quae respicit totam speciem et ulterius

1. *De Malo*, q.16, a.9, c. Note that by “perfect” and “imperfect” animals St. Thomas means higher and lower forms of animals. St. Thomas could imagine that maggots came immediately from carrion but not dogs or men. For the generation of such perfect animals, the whole mechanism of nature was required, the power of particular causes as well as that of universal causes, with many intermediate causes. “Animalia generata ex putrefactione sunt minoris perfectionis aliis animalibus; unde in eorum generatione efficit vis caelestis corporis inferiori materiae impressa, quod in generatione animalium perfectorum facit eadem vis caelestis cum virtute seminis” (*De Pot.*, q.3, a.8, ad 15).

2. Cf. *De Ver.*, q.5, a.8, c.; *Ia*, q.110, a.1, c.

3. *Ia*, q.65, a.4, c.

4. *Ibid.*

5. Cf. *De Pot.*, q.6, a.3, c; *Ia*, q.110, a.1, ad 3. For a more complete exposition of the mediative role of the angels in the order of the universe, cf. FR. JOSEPH LEGRAND, *L'univers et l'homme dans la philosophie de saint Thomas*, vol. I, pp.170-183.

totum esse naturae inferioris. Et propter hoc nihil agit ad speciem in istis inferioribus nisi per virtutem corporis caelestis, nec aliquid agit ad esse nisi per virtutem Dei. Ipsum enim esse est communissimus effectus primus et intimior omnibus aliis effectibus; et ideo soli Deo competit secundum virtutem propriam talis effectus: unde etiam, ut dicitur in lib. *de Causis*, intelligentia non dat esse, nisi prout est in ea virtus divina.¹

The first universal cause of nature is principle of what is common to all things of nature, all things that change or are subject to generation and corruption. It is itself moved by the absolutely universal and immobile cause and it is particular, by contrast to the simply universal cause, inasmuch as it causes only what is common to the things of nature as such. The same will be said, analogously, of the universal causes of the various species, until we are left with only the particular cause which is principle *per se* of a particular effect.²

In conjunction with universal and particular causes, we should mention also a parallel distinction between equivocal and univocal causes. This distinction came up in passing in a text we saw earlier. A particular cause is a univocal cause; it produces something like itself, something that belongs to the same species. A man generates another man. In view of the principle, *omne agens agit sibi simile*, we might suppose that all causes are univocal, but everything we have seen about universal causes rules this out. A universal cause cannot be univocal.

1. *De Pot.*, q.3, a.7, c.

2. We cannot entirely agree with Fr. André Hayen when he writes that St. Thomas was not sufficiently critical of the "Platonic" or Greek hierarchy of the world (Cf. *La communication de l'être d'après saint Thomas d'Aquin*, Vol. II, pp. 29, 38-43). While it is no doubt true that the representation of this hierarchy which St. Thomas got from the Greeks did keep him from seeing all that was implied in his insight on the level of being, still the idea of a hierarchy cannot be dispensed with if one is to understand not only that being is communicated to a plurality and a diversity of beings but also that the power to act is given to these beings so that through their action they may constitute a *universe*. As we saw, the idea of a secondary universal cause arises from an *admiratio causarum* as this wonder comes to focus on what is common to many in reality. This remains whether or not one admits the validity of a Platonic descending hierarchy or an Aristotelian ascending hierarchy in the world. Fr. Hayen's distinction between the interior order of being and creation and the exterior order of information and movement in which being "expresses" itself as the soul expresses itself in the body (cf. *loc. cit.* and also pp. 275ff) is inadequate by itself. It must be complemented by the distinction between being and action and by the distinction which we have seen and to which he himself alludes between causing without movement and causing through movement. Without the latter kind of causing one is reduced to a kind of occasionalism on the level of creatures, and the relationship of "expression" between the two kinds of causation, while it brings out the intimate connection between the two very well, does not sufficiently manifest the reality of this secondary kind of causing. The universe is not constituted only by beings who receive being in common, but rather it is constituted by these beings through the exercise of their own activity. It starts in a *communication de l'être*, but it ends in a *communication dans l'être* where different beings truly "influence" the being of one another. This the distinction between form and matter makes possible, for the two are truly principles of *being*.

If the sun is instrumental in the generation of a man, it does not bring about the production of a sun but of a man like the man generating him. Also in creating, God does not create another God. The notion of similitude in the principle, *omne agens agit sibi simile*, must be understood in a sense broad enough to include these universal types of causality.

Similitude is a matter of conformity between things, a resemblance of forms. But not all forms are found in nature. There are forms in the intelligence and these can also be the principles of things,¹ as the form in the intelligence of an engineer is *per se* principle of the bridge he constructs. The divine ideas are the *per se* principles of the forms in things, they are the incorporeal principle from which all forms ultimately depend. Particular natural agents, the univocal causes of nature, have the form of the thing produced and to which the form is communicated *actu*. The universal agents, however, have it *virtute* and *modo eminentiori*. According to a principle we have already encountered, the universal cause, which is prior to the particular cause, is more perfect and higher because it is cause not only of an individual in a species but of the whole species. The universal cause, therefore, is not a part of the species. It possesses the perfection of that species in a more perfect way. This is eminently true of the simply universal cause, but it is also true of all subordinate universal causes. It should be noted also that the universal cause is not entirely equivocal, for otherwise it would not act *sibi simile*. "Causa autem universalis est prior particulari. Hoc autem agens universale, licet non sit univocum, non tamen est omnino aequivocum, quia sic non faceret sibi simile; sed potest dici analogicum."²

The idea of univocal cause, on the other hand, the cause that produces forms utterly similar to it, helps to bring out the importance of the particular cause, the natural individual agent composed of matter and form, according to what we saw in the argument against excessive extrinsicism. It also helps to bring out the role of matter in the order of causes, since matter is the principle of individuality and the individual is truly said to be cause, as well as the role of form, since the form is both principle of activity and basis of similitude.

1. In fact, the forms in intelligences are universal causes surpassing all others. "Constat autem quod virtus intellectiva est universalior omni alia virtute operativa: nam virtus intellectiva continet formas universales, omnis autem virtus operativa tantum est ex aliqua forma propria operantis" (*Cont. Gent.*, III, c.78, n.2538). This is why the heavenly bodies, the supposed universal causes of nature, are said to contain the forms of the things which they are instrumental in causing *virtute tantum*, for they do not contain them *actu* as do the particular causes, which are univocal, nor do they have intelligences to contain them as universal species.

2. *Ia*, q.13, a.5, ad 1.

V. THE DISPOSITION OF BEINGS IN THE UNIVERSE

To sum up what we have seen thus far on the order of causes, let us now turn to Book III *Contra Gentiles*, c.97, where St. Thomas synthesizes his doctrine in this regard: "quomodo dispositio providentiae habeat rationem."

The principle of the whole order is the divine goodness to which all things are ordered. Since the similitude of this goodness could be impressed more perfectly in creation only if there was a diversity and a plurality of things, there had to be a plurality of forms, for things are diverse inasmuch as they have diverse forms which constitute different species. "Sic igitur ex fine sumitur ratio diversitatis formarum in rebus." This diversity of forms, in turn, is the explanation for the order and the grades of perfection in the universe and for the different types of activity. "Ex diversitate autem formarum sumitur ratio ordinis rerum." Things differ according to whether they are more or less like the divine goodness and perfection. Those closer are more perfect; those more distant are less perfect. Anyone who looks carefully will see how the completion of the universe is constituted by a wide diversity of things. "Et hoc evidenter apparet naturas rerum speculanti. Inveniet enim, si quis diligenter consideret, gradatim rerum diversitatem compleri: nam supra inanimata corpora inveniet plantas, et super has irrationalia animalia; et super has intellectuales substantias . . ." Thus diversity, which is required for the end of creation, requires that not all things be of equal perfection but that there be different degrees and an order between them. Form, the principle of diversity according to species, is also the principle of activity, since everything acts inasmuch as it is in act and everything is in act through its form, whereas what is in potency, as such, has no activity. "Oportet ergo, si sint diversae formae, quod habeant diversas operationes."¹

This diversity of operations itself implies an order as well as the order of forms, an order of mediation in causality. It belonged to the goodness and perfection of God that he communicate the similitude of his goodness, not only so that creatures would be but also they would be able to communicate goodness themselves to others beneath them: "ut scilicet, res creata non solum a divina bonitate haberet quod esset et bona esset, sed etiam quod alii esse et bonitatem largiretur."² Thus, even though no creature participated in the disposition of things according to the divine wisdom, many were called to participate in the execution of the plan, the more perfect and the closer to God acting on the less perfect, since the more perfect participate more of the divine perfection which consists in communicating its goodness and since

1. Cf. nn. 2724-2726.

2. *De Ver.*, q.8, a.8, c.

they are closer to the universal cause of all things.¹ "Unde et in ordine universi creaturae superiores ex influentia divinae bonitatis habent non solum quod in seipsis bonae sint; sed etiam quod sint causa bonitatis aliorum, quae extremum modum participationis divinae bonitatis habent; quam scilicet participant ad hoc solum ut sint, non ut alia causent. Et inde est quod semper agens est honorabilius patiente . . ."² Intellectual creatures, of course, are called to participate most intimately in the execution of this order, since they have both the knowledge and the power to do so, as opposed to those that have only power without knowledge, and also since they are more universal in their power of acting as well as better able to know the reasons of the order, the *rationes ordinis*.³ But some corporal agents are also called to participate more than others, those that are superior and *formaliter*, and hence more active, those that are more perfect, closer to intellectual creatures and to immobility.⁴ Thus, from the highest to the lowest, there is an order to be followed which St. Thomas describes as a certain care in divine providence to observe a certain proportion.

Quia vero ad providentiam divinam pertinet ut ordo servetur in rebus; congruus autem ordo est ut a supremis ad infima proportionaliter usque ad res ultimas perveniat. Haec autem proportio est ut, sicut supremae creaturae sunt sub Deo et gubernantur ab ipso, ita inferiores creaturae sint sub superioribus et regantur ab ipsis.⁵

It will be noted that this proportion is something inscribed in the things of the universe itself. It is a direct consequence of the inequality in things.

Ipsa inaequalitas constituta per divinam sapientiam in rebus creatis, ut dictum est, exigit quod una creatura agat in aliam. Secundum hoc enim attenditur in creaturis inaequalitas, quod una est perfectior altera. Perfectius autem comparatur ad minus perfectum, sicut actus ad potentiam. Est autem de ratione existentis in actu, quod agat in id quod est in potentia. Et sic necesse est quod una creatura agat in aliam. Sed sicut creatura esse in actu participat a Deo, qui est purus actus, ita et virtutem agendi participat a Deo, et agit eius virtute, sicut causa secunda virtute causae primae.⁶

Thus the "virtue" of the First Cause descends *proportionaliter* through the various degrees of being to reach ultimately what is lowest, passing through the more perfect beings to act upon the things still in

1. Cf. *Cont. Gent.*, III, c.94, n.2694; c.77, n.2528; c.79, nn.2542ff; *Ia*, q.105, a.6, c.; *Comp. Theol.*, I, c.73, n.127; *De Subst. Sep.*, c.14, n.132.

2. *De Ver.*, q.8, a.8, c.

3. Cf. *Cont. Gent.*, II, c.78; *In De Causis*, lect.23.

4. Cf. *Cont. Gent.*, III, c.82; *Ia*, q. 115, a.3, c.

5. *Cont. Gent.*, III, c.78, n.2535.

6. *Ia*, q.45, a.3, c. (Codex Canisiensis).

potency. We see this even in the realm of corporal beings, for there also diversity and order bring about an influence of the higher upon the lower. "Si enim diversae substantiae corporales substantialiter distinctae accipiantur, tunc non quaelibet substantia corporalis erit ultima entium et remotissima a primo agente, sed una erit alia superior et primo agenti propinquior, et sic una in alia agere poterit"¹

The reason for this activity of the higher upon the lower will appear if we look further into what follows from the diversity of forms, especially with regard to matter. From the diversity of forms there also follows a diversity in matter itself, "diversa habitudo materiae ad res."² Matter is correlative to form and can be known only in its relation to form, since it is in act only through its form.³ Some forms exist without matter, but other forms cannot exist without matter, "materiam pro fundamento requirunt: ut sic illud quod subsistit non sit forma tantum, neque materia tantum, sed compositum ex utroque."⁴ Matter and form, however, cannot constitute something that is one unless there is some proportion between them. Hence there are different matters for different forms, some forms requiring relatively simple matter, other forms requiring a more complex matter with different dispositions or arrangements of parts according to the exigencies of the species and of the proper operation of different forms.

A form that needs matter to exist has a necessary relation to matter, and a diversity of such forms entails a diversity of relation to matter. It is in this diversity of relation to matter in different forms that is found the reason for diversity of activity and passivity in material things.

Ex diversa autem habitudine ad materiam sequitur diversitas agentium et patientium. Cum enim agat unumquodque ratione formae, patitur vero et moveatur ratione materiae, oportet quod illa quorum formae sunt perfectiores et minus materiales, agant in illa quae sunt magis materialia, et quorum formae sunt imperfectiores.⁵

The things whose form is more perfect and dominates matter more completely, whose form is *minus materialis* and hence higher and more universal, are more active than those whose form is less perfect, more absorbed in matter and more particular. And since activity is communication between things, the more perfect act upon the less perfect, whose potentiality is meant to be reduced to act by the more perfect.

Thus, as forms diversify reality from the highest to the lowest, so also they diversify the activity which binds all things into one

1. *De Pot.*, q.3, a.7, c.

2. *Cont. Gent.*, III, c.97, n.2728.

3. Cf. *In De Trin.*, lect. 1, q.2 (4), a.2, c.; *In I Phys.*, lect.13, n.118 (9).

4. *Cont. Gent.*, III, c.97, n.2728.

5. *Ibid.*, n.2730.

universe, from the highest to the lowest. "Ordo universi includit in se et conservationem rerum diversarum a Deo institutarum, et motionem earum; quia secundum hæc duo invenitur ordo in rebus, secundum scilicet quod una est melior alia, et secundum quod una ab alia movetur."¹ The order of movers is as much *per se* as that of forms, for it is the intention of the First Mover not only to create different kinds of being, but also to govern them the lower through the higher: "intentio primæ causæ respicit usque ad ultimum effectum per omnes causas medias."²

VI. THE END

There remains the role of final causality to be considered. It will be remembered that we are concerned here primarily with the causes that are part of the universe itself. With regard to the transcendent final end of the universe, its *bonum separatim, ipsa bonitas divina communicanda et repræsentanda per similitudinem et essendi et causandi in rebus creatis*, we saw, at the beginning of *Contra Gentiles*, III, c.97, that it was the reason for all the diversity and order of the universe. "Manifestum est autem quod tota ratio ordinis quam sapiens regus a se factis imponit, a fine sumitur."³ This primordial role of the divine goodness as final cause however, does not exclude the participation of created things in it any more than the primordial role of the Creator as efficient cause excludes the activity of secondary agents.

Final causality has a role all its own to play in the order of the universe. The end is the cause of causes, the *causa causarum*; its causality is first with respect to the other causes. Since a cause is a principle of order, this means that the final cause will be the ultimate principle of order, the cause that will make all things one most completely.

But how is the end the cause of causes? Indeed, how is it a cause at all? Unlike any of the other three kinds of causes, it is possible for an end not to exist while that of which it is the cause already exists. "Finis autem aliquis invenitur qui, etiam si primatum obtineat in causando secundum quod est in intentione, est tamen in essendo posterius. Quod quidem contingit in quolibet fine quem agens sua actione constituit: sicut medicus constituit sanitatem per suam actionem in infirmo, quæ tamen est finis eius."⁴ To use another example found frequently in St. Thomas, the end of a house is to be inhabited, but this comes only after the material has been disposed according to the form designed by the architect. Yet the end is truly a cause because it answers the question "why?," *propter quid*. It gives the reason for

1. *Ia*, q.103, a.4, ad 1.

2. *In De Causis*, lect.1, n.40.

3. *Ia*, q.25, a.5, c.

4. *Cont. Gent.*, III, c.18, n.2000.

the existence of something or for doing something. If we ask what a house is for, the complete answer will have to include its end, and that will be its reason for coming to be, even though this end will be the last thing to be realized.¹ It is clear, however, that the end does not exercise its causality apart from the efficient cause. "Finis non est causa, nisi secundum quod movet efficientem ad agendum; non enim est primum in esse, sed in intentione solum."²

In spite of its posteriority in being, however, the causality of the end is still first. Even in those things where the end does not come before what the agent realizes,³ the end remains first in causing. "Efficiens est causa finis quantum ad esse quidem, quia movendo perducit efficiens ad hoc, quod finis sit. Finis autem est causa efficientis non quantum ad esse, sed quantum ad rationem causalitatis. Nam efficiens est causa in quantum agit: non autem agit nisi causa finis. Unde ex fine habet suam causalitatem efficiens."⁴

Through the efficient cause the causality of the end reaches form and matter, for the forms of things are ordered to their end and their matter is ordered to the forms as to an end. This appears most readily in the production of such things as houses and ships, where the use determines what the form will be and the form determines what materials will be used and how they will be disposed.⁵ "Efficiens autem est causa causalitatis et materiae et formae. Nam facit per suum motum materiam esse susceptivam formae, et formam inesse materiae."⁶ Hence, because every agent acts for an end, it follows that the end is cause of the other causes and of the order between them. No other cause can be cause in act independently of the final cause. "Finis inter alias causas primatum obtinet, et ab ipso omnes aliae habent quod sint causae in actu: agens enim non agit nisi propter finem, . . . Ex agente autem materia in actum formae reducitur: unde materia fit actu huius rei materia, et similiter forma huius rei, per actionem agentis, et per consequens per finem."⁷

Final causality filters down to matter and form, so to speak, or is diffused, to use an expression more familiar to St. Thomas, in such a way that the form becomes, in a certain way, the end of matter. In the

1. Cf. *In II Phys.*, lect.5, n.181 (6); lect.15, nn.272 (4)-274 (6).

2. *De Pot.*, q.5, a.1, c.

3. Sometimes the end is prior not only in causing, but also in being. "Aliquis enim finis invenitur qui, sicut est praecedens in causando, ita etiam in essendo praecedat: sicut dicitur finis id quod aliquid sua actione vel motu acquirere intendit, ut locum sursum ignis per suum motum, et civitatem rex per pugnam" (*Cont. Gent.*, III, c.18, n.2000). God is, of course, the first of such ends. Cf. *In De Div. Nom.*, c.1, lect.3, n.92.

4. *In V Metaph.*, lect.2, n.775.

5. Cf. *In II Phys.*, lect.4, n.173 (8); *In I Metaph.*, lect.2, nn.25-28.

6. *In V Metaph.*, lect.3, n.780.

7. *Cont. Gent.*, III, c.17, n.1997.

process of generation the form is what comes last, but inasmuch as the form is that toward which the process is tending as to its end, the form is the end of generation and hence of matter in the process of becoming.

Cum enim materia sit ens in potentia secundum se considerata, forma vero sit actus eius; substantia vero composita sit actu existens per formam: forma quidem erit secundum se bona, substantia vero composita prout actu habet formam; materia vero secundum quod est in potentia ad formam.¹

Inasmuch as matter is in potency to form there is in it a natural appetite to form; it is imperfect and seeks its perfection through motion. "Oportet quod intentio cuiuslibet in potentia existentis sit ut per motum tendat in actum."² Thus we see final causality reaching down to the lowest degree of being, to being which is only in potency, to begin a movement of ascension and return toward the source of all perfection.

In the line of agent causality we saw a descending order going from the higher to the lower. There is a proportionate order in the line of final causality as well. "Secundum ordinem agentium est ordo finium ita quod primo agenti respondet finis ultimus, et proportionaliter per ordinem alii fines aliis agentibus."³ Such an order has to exist from the viewpoint of final causality itself, for all things are ordered to God as to their final good and many things cannot be ordered to the same end without being at the same time ordered among themselves, one thing thus being an end for the other while remaining itself ordered to its ultimate end.

Cum autem omnia, sicut ostensum est, in divinam bonitatem ordinentur sicut in finem, eorum autem quae ad hunc finem ordinantur, quaedam propinquiora sunt fini, quae plenius divinam bonitatem participant, consequens est ut ea quae sunt inferiora in rebus creatis, quae minus de bonitate divina participant, ordinentur quodammodo sicut in fines in entia superiora. In omni enim ordine finium, quae sunt propinquiora ultimo fini, sunt etiam fines eorum quae sunt magis remota: sicut potio medicinae est propter purgationem, purgatio autem propter maciem, macies autem propter sanitatem, et sic macies finis est quodammodo purgationis, sicut etiam potionis purgatio. Et hoc rationabiliter accidit. Sicut enim in ordine causarum agentium virtus primi agentis pervenit ad ultimos effectus per medias causas, ita in ordine finium, quae sunt magis remota a fine, pertingunt ad ultimum finem mediantibus his quae sunt magis propinqua fini: sicut potio non ordinatur ad sanitatem nisi per purgationem. Unde et in ordine universi inferiora consequuntur praecipue ultimum finem in quantum ordinantur ad superiora.⁴

1. *Ibid.*, c. 20, n.2013.

2. *Ibid.*, c.22, n.2130.

3. *De Pot.*, q.7, a.2, ad 10.

4. *Comp. Theol.*, I, c.148, n.296.

VII. CONVERSION AND RETURN

The two orders of causality, efficient and final, are not merely juxtaposed, however; one comes after the other and flows out of the other, as it were. "Omnis effectus convertitur ad causam a qua procedit, ut Platonici dicunt. Cuius ratio est quia unaquaeque res convertitur ad suum bonum, appetendo illud; bonum autem effectus est ex sua causa, unde omnis effectus convertitur ad suam causam, appetendo ipsam."¹ In the descending order of efficient causality one creature acts upon the other inasmuch as it is more perfect and hence related to the less perfect as act is to potency, for what exists in act acts upon what is in potency: "est autem de ratione existentis in actu, quod agat in id quod est in potentia." In the line of final causality we see the counterpart of this, beginning in the lowest degree of being and setting in motion a return of creation toward its Creator.

Finis ultimus omnium Deus est: sunt tamen et fines alii sub isto fine, secundum quod una creatura ad aliam ordinatur ut ad finem, imperfectiora scilicet ad perfectiora, ut materia ad formam, elementa ad mixta, plantae ad animalia, animalia ad homines.²

Man is above the rest of material nature. That is why he can act upon it as he does. But that is also a proof that the rest of material nature is ordered to him as to its end.

The foundation for this proportionate return from lower to higher lies in the peculiar relation between agent and patient, between cause and effect, as suggested in the text just quoted from *In De Divinis Nominibus*. The agent tends to make the effect like itself — *agit sibi simile*. From the point of view of the effect as such, that is, as dependent upon its cause, this becomes a tendency to be like the agent. "Eiusdem rationis est quod effectus tendat in similitudinem agentis, et quod agens assimilet sibi effectus; tendit enim effectus in finem in quem dirigitur ab agente."³ For the effect of an agent that acts through art, this means that it will be like the idea the agent had in mind. In the generation of a substance through natural agency, however, the form of the effect will be like that of the agent, and, for as much, the agent will be said to be the end of the effect. "Agens dicitur esse finis effectus in quantum effectus tendit in similitudinem agentis: unde forma generantis est finis generationis."⁴ The form of the thing generated will not be the same as that of the progenitor numerically, but it will be the same specifically. It will have the same degree of perfection.

1. *In De Div. Nom.*, c.1, lect.3, n.94.

2. *Ia*, q.47, a.3, ad 3 (Codex Canisiensis).

3. *Cont. Gent.*, III, c.21, n.2021.

4. *Ibid.*, c.19, n.2005.

Perfection is the term of becoming and the power itself to generate something is the sign of perfection. The perfection of the thing generated lies in a similitude with the thing generating. That is why it tends toward this similitude as much as possible.

Unumquodque autem appetit suam perfectionem; perfectio autem et forma effectus est quaedam similitudo agentis, cum omne agens agat sibi simile: unde ipsum agens est appetibile et habet rationem boni.¹

VII. UNIVERSAL ORDER

This tendency of the effect to become like its agent cause must be seen not only in the light of univocal causality but also in the light of equivocal causality. Since the equivocal cause contains the perfection which is communicated to the effect in a super-eminent way, which transcends the degree of perfection proper to the effect, the effect does not tend to become like the equivocal cause simply, as it does for its univocal cause. The horse, for example, does not tend to become like the sun, but it does tend to become like the horse that generated it. But the effect still tends to be assimilated to its superior cause in a certain way, that is, by participation in the order that depends on the superior cause. Though this order transcends its own particular order, it is still open to it and subordinate to it and this in a way that is natural to it. "In re qualibet naturali est naturalis ordo et habitudo ad causas omnes superiores: et inde est quod illa quae fiunt in corporibus inferioribus ex impressione caelestium corporum, non sunt violenta, licet videantur contraria naturalibus motibus inferiorum corporum, ut patet in fluxu et refluxu maris, qui sequitur motum lunae."²

It is easy to see that this tendency of an effect to become like its superior cause will be of utmost importance for the order of the universe, since it consists precisely in participating in the order directly dependent upon the superior cause. Nature is the principle of order in all the things of nature: "natura est causa ordinationis in omnibus naturalibus."³ But if we look only at the order of particular causes, there will be many things in nature that will be opposed to that order, for all defects and corruption are against particular natures.

Quod enim ignis corrumpatur contra naturam particularem huius ignis est. Unde Philosophus dicit, quod corruptio et senium et defectus omnis contra naturam est.⁴

1. *Ia*, q.6, a.1, c.

2. *De Pot.*, q.6, a.1, ad 17.

3. *Ibid.*, ad 10.

4. *Ibid.*, ad 1.

But these things which are against particular natures find their place in the order of nature, if we look at them in the light of universal causes.

Contra naturam vero universalem nulla res naturalis agit; dicitur enim natura particularis secundum ordinem particularis causae ad particularem effectum; natura vero universalis secundum ordinem primi agentis in natura, quod est caelum ad omnia inferiora agentia. Cum autem nullum inferiorum corporum agat nisi per virtutem caelestis corporis, impossibile est quod corpus naturale agat contra naturam universalem. Sed hoc ipsum quod aliquid agit contra naturam particularem, est secundum naturam universalem.¹

This will be clear if we consider how corruption enters into the order of nature. It cannot be intended by a particular nature. Nature is principle of generation. Form is the end of generation and it is directly intended by nature, by a particular nature as well as universal nature. Privation, on the other hand, is outside the intention of a particular nature, but it remains within the scope of universal nature, although still not intended *per se*, because one form cannot be introduced without the privation of another, that is, without the corruption of something, which is intended *per accidens*. *Generatio unius est corruptio alterius*. Thus corruption enters into the order of nature, as it should, since it is certainly a natural phenomenon, through the broader viewpoint of the universal cause.²

If we look only to the order of particular causes, chance and fortune also seem simply outside of all order. But if we view them in the light of universal causes, we will see that they also can be reduced to order. Chance and fortune are "quasi defectus et privationes naturae et artis."³ They are not causes *per se* and so what comes of them is not assimilated to them. Thus, in a certain way, the generation of maggots from putrefaction seems to be something that happens purely by chance, since the maggots do not seem to come from things like themselves according to species, nor do they seem to have a definite agent cause *in istis inferioribus*. But, as we know, the cause of such "chance" events was thought to be in the heavenly bodies, so that what appeared to be mere chance from the point of view of the particular agents on earth was actually intended by the superior agent causes of nature. St. Thomas explains the point masterfully in reconciling the reality of both chance and providence.

Ad horum autem evidentiam considerandum est, quod quanto aliqua causa est altior, tanto eius causalitas ad plura se extendit. Habet enim causa altior proprium causatum altius quod est communius et in pluribus

1. *Ibid.*

2. Cf. *De Pot.*, q.3, a.6, ad 19.

3. *In XII Metaph.*, lect.3, n.2445.

inventum. Sicut in artificialibus patet quod ars politica, quae est supra militarem, ad totum statum communitatis se extendit. Militaris autem solum ad eos, qui in ordine militari continentur. Ordinatio autem quae est in effectibus ex aliqua causa tantum se extendit quantum extendit se illius causae causalitas. Omnis enim causa per se habet determinatos effectus, quos secundum aliquem ordinem producit. Manifestum igitur est, quod effectus relati ad aliquam inferiorem causam nullum ordinem habere videntur, sed per accidens sibiipsis coincidunt; qui si referantur ad superiorem causam communem, ordinati inveniuntur, et non per accidens coniuncti, sed ab una per se causa simul producti sunt.¹

The meeting of two soldiers in the field, or of two parts of an army, may be quite fortuitous as far as the two are concerned, but it could very well be intended by the general commanding both.

To illustrate his point in nature, St. Thomas takes the instance of flowers blooming side by side. If we consider only the particular power of one or the other, there does not seem to be any order between the blooming of one and the blooming of the other; in fact, their blooming together side by side seems purely accidental. This is so because the cause of the power to bloom of one flower extends only to the blooming of that one and not to that of its blooming at the same time as the other, "non autem quod simul cum altera." If, however, we refer to the common cause of both blooming, this simultaneity will be seen to be not coincidental (*per accidens*) but ordered by a first cause bringing this about, a first cause that moves both flowers to bloom at the same time.

Mutations in a process of evolution, be it noted in passing, would have to be referred in like fashion to a superior, universal cause. If we refer them only to particular causes, they seem to happen only by chance, *per accidens*; none of the particular causes bringing the mutation about has the power to produce it *per se*, just as for St. Thomas carrion did not have the power to produce maggots. But if nature as a whole developed through a process of evolution, then universal nature was cause *per se* of the mutations, the end of the process as a whole being the ultimate cause, and ordering what at first appears as only random.

The heavenly bodies are no longer thought to hold the privileged place in nature they had in the eyes of the ancients. We now see them as bodies essentially the same as those we know on earth and we can no longer see them as embodying the universal power of nature, as Aristotle and St. Thomas did. But we still have to find a universal cause operative in nature in order to explain the order that seems even more apparent today than it did in the thirteenth century and to explain things and events that particular causes alone cannot explain. "Si igitur ea quae hic sunt contingentia, reducamus in causas proximas tantum, inveniuntur multa fieri per accidens, tum propter con-

1. In VI *Metaph.*, lect.3, n.1205.

cursum duarum causarum . . . tum etiam propter defectum agentis, cui accidit debilitas, ut non possit pervenire ad finem intentum . . . tum etiam propter indispositionem materiae, quae non recepit formam intentam ab agente, sed alterius modi . . .”¹ There has to be a superior cause for the order that emerges in nature as a whole, that is, for what comes to be, not merely *per accidens* but also *per se*. This order cannot simply result from particular forces acting in nature, for order implies a recurrence either *ut semper* or *ut frequentius*, something that particular causes alone cannot account for, since their concurrence is coincidental as far as they are concerned. Nor does the idea of a natural process of selection by elimination of the inept satisfy this exigency for a cause *per se* of the order, for it presupposes the idea of aptness, which implies both an order and a tendency toward such an order.²

Arguments that go against the idea of finality in nature usually fail to appreciate the universal view of nature as an ordered whole and look only to particular causes: “comparatur enim causa universalis ad effectum particularem.”³ If we look at the two together, we see the need for both finality and universal causality, the need for a superior cause that is common cause for the particular agents which seem to come together only by chance, a cause that would not have the defectibility of inferior causes, a cause that would have matter completely at its command. This cause would be *per se* principle even of things and events that seem contingent and independent of all order at a lower level and so would embrace them within its own order. The existence of finality in nature would depend upon the order intended by such a universal cause. Nature itself, which is principle and cause of order, without, however, acting through intelligence and deliberation, thus appears as an order implanted in things directing them toward a determinate end. This is the conclusion St. Thomas adds to his discussion of the Aristotelian arguments for finality in nature. “Unde patet quod natura nihil est aliud quam ratio cuiusdam artis, scilicet divinae, indita rebus, qua ipsae res moventur ad finem determinatum: sicut si artifex factor navis posset lignis tribuere, quod ex se ipsis moverentur ad navis formam inducendam.”⁴

IX. FINAL UNIFICATION

The order of the universe does not end with the constitution of different degrees of being. It only begins with that. The activity of the different beings that constitute the universe opens up another dimen-

1. *Ibid.*, n.1210.

2. Cf. *In II Phys.*, lect.13, n.257 (3); lect.14, nn.263 (3), 267 (7).

3. *Ibid.*, lect.12, n.254 (5).

4. *Ibid.*, lect.14, n.268 (8).

sion in this order. In fact, it makes the bond that joins all things together even tighter than it might have been otherwise. "Rerum enim quae sunt diversae secundum suas naturas, non est colligatio in ordinis unitatem nisi per hoc quod quaedam agunt et quaedam patiuntur."¹ In this more dynamic and more complete understanding of order the final end is seen as principle of order. Activity and finality are inseparable, for every agent acts in view of an end,² and so everything that enters into an activity in a positive way is ordered in function of the end. Where there is a subordination of agents, there is subordination of ends as well.

In omnibus causis agentibus ordinatis, ubi agitur propter finem, oportet quod fines causarum secundarum sint propter finem causae primae: sicut finis militaris et equestris et frenifactoris est propter finem civilis. Processus autem entium a primo ente est per actionem ordinatam in finem: cum sit per intellectum, ut ostensum est; intellectus autem omnis propter finem agit.³

In this perspective the diversity of forms remains principle of diversity in activity: "ex diversitate formarum sequitur operationum differentia;" but it appears now more as first in intention than as first in being, more as final end than as *principium*, more as something to be brought to perfection through the activity of second causes than as presupposed by this activity.

Si igitur in productione rerum sunt aliquae causae secundae, oportet quod fines earum et actiones sint propter finem causae primae, qui est ultimus finis in rebus causatis. Hoc autem est distinctio et ordo partium universi, qui est quasi ultima forma. Non igitur est distinctio in rebus et ordo propter actiones secundarum causarum: sed magis actiones secundarum causarum sunt propter ordinem et distinctionem in rebus constituendam.⁴

The final end of the universe as something to be realized in the very beings of the universe, *in rebus causatis*, is something like the form of a thing that comes to be through a process of generation. This form, in its perfection and completeness, is what appears last in the process, but everything in the process works, is ordered, toward its realization. Through their activity the beings that are a part of the universe are working toward the realization of its *quasi ultima forma*, the order and distinction in things representing most perfectly the divine perfection.

They do this not in any way whatever, each contributing to the perfection of the universe independently of other things, but in subordination to one another. Each has its proper activity and its proper end. "Quia vero per propriam actionem res quaelibet ad proprium finem

1. *Cont. Gent.*, III, c.69, n.2447.

2. Cf. *Cont. Gent.*, III, c.2; *De Pot.*, q.1, a.5; q.3, a.15; *Ia*, q.44, a.4.

3. *Cont. Gent.*, II, c.42, n.1185.

4. *Ibid.*

pertingit, necesse est et proprios fines diversificari in rebus."¹ But the proper activity and the proper end of each is not an absolute. It is only a particular which, as such, is related to the universal. It has to enter into the order of the universe as a whole, as the proper end of the various parts of an animal have to serve for the perfection of the whole, the less noble being ordered under the more noble.

Sic igitur et in partibus universi unaquaqueque creatura est propter suum proprium actum, et perfectionem; secundo autem creaturae ignobiliores sunt propter nobiliores, sicut creaturae quae sunt infra hominem, sunt propter hominem; singulae autem creaturae sunt propter perfectionem totius universi; ulterius autem totum universum cum singulis suis partibus ordinatur in Deum sicut in finem.²

The perfection of the universe as realized in diversity and order is what is closest to the divine perfection. That is why it is an end with regard to the activity of all beings in the universe. The beings that are most closely associated with this perfection also become ends with regard to those that are more remote, by reason of their proximity to the higher end. "Et sic patet quod ordo universi attenditur secundum quod una creatura agit in aliam, et secundum quod una fit in similitudinem alterius, et secundum quod una est finis alterius."³

Oliva BLANCHETTE.

1. *Ibid.*, III, c.97, n.2727.

2. *Ia*, q.65, a.2, c.

3. *Ibid.*, q.47, a.3, ad 3 (Codex Canisiensis).