

## QUANTITY - CHAPTER SIX

This chapter is divided into two parts. In the first part, Aristotle distinguishes the species of quantity and then separates quantities by happening or per accidens from those that are quantities as such or quantities per se (which are the species of quantity). In the second part, he gives three properties of quantity.

Aristotle distinguishes the species of quantity in two ways. He does so in both, by looking at their parts and seeing something they have or do not have. He then unfolds each of these ways.

The understanding of quantity and its species is properly done by looking at its parts. For every quantity consists in some multiplication of parts:

Omnis quantitas in quadam multiplicatione partium consistit: et propter hoc numerus est prima quantitatum. Ubi ergo pluralitas nullam differentiam operatur, ibi nec aliquid quod quantitatem consequitur aliquam differentiam facit.<sup>1</sup>

Moreover, the first sense of *whole* and *part* is in quantity, as is clear from the fifth book of *Wisdom*. So it is natural to distinguish the kinds of quantity by their parts.

In the fifth book of *Wisdom*, Aristotle distinguishes quantity in general from other wholes by the parts into which it can be divided. It is divided into parts that are in it (somewhat) in act and each of which is apt to be something one and a this something:

Primo ponit rationem quantitatis; dicens, quod quantum dicitur quod est divisibile in ea quae insunt.

Quod quidem dicitur ad differentiam divisionis mixtorum. Nam corpus mixtum resolvitur in elementa, quae non sunt actu in mixto, sed virtute tantum. Unde non est ibi tantum divisio quantitatis; sed oportet quod adsit aliqua alteratio, per quam mixtum resolvitur in elementa.

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<sup>1</sup> Thomas Aquinas, *Summa Contra Gentiles*, Liber I, Capitulum LXIX

Et iterum addit, quod utrumque aut singulum, est natum esse "unum aliquid", hoc est aliquid demonstratum.

Et hoc dicit ad removendum divisionem in partes essentielles, quae sunt materia et forma. Nam neutrum eorum aptum natum est esse unum aliquid per se.

secundo...Ponit species quantitatis; inter quas primae sunt duae; scilicet multitudo sive pluralitas, et magnitudo sive mensura. Utrumque autem eorum habet rationem quanti, in quantum multitudo numerabilis est et magnitudo est mensurabilis. Mensuratio enim proprie pertinet ad quantitatem.

Definitur autem multitudo sic. Multitudo est, quod est divisibile secundum potentiam in partes non continuas. Magnitudo autem quod est divisibile in partes continuas.<sup>2</sup>

This seems to be another way of making known quantity in reference to substance – other than measure of substance. And it also shows how close quantity is to substance and, therefore, that it is rightly ordered immediately after it in the *Categories*. And it is fitting in wisdom to define quantity in comparison to substance which is the chief subject of wisdom. The first part of this definition separates quantity from the universal whole which has its parts in it only in ability and the second part separates it from the whole composed of matter and form and from the whole that is a definition.

Further, since (composing) parts are like matter, this reminds us of Albert and Thomas distinguishing quantity and quality in correspondence with the matter and form in substance.

But the distinction of the species of quantity must be based on other differences of their parts. In the fifth book of *Wisdom*, the fifth book *After (meta) the (ta) Books in Natural Philosophy (phusika)*, Aristotle distinguishes between those having continuous parts and those not having continuous parts. Perhaps, he here includes both definitions of the continuous (that fitting natural philosophy; what is divisible forever – and that fitting logic: whose parts meet at a common limit or boundary).

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<sup>2</sup>In *V Metaphysicorum*, Lectio XV, n. 977-978

Some quantities have parts that do not have a common limit or boundary while others do have such a limit. The former are called *discrete* and include number and speech. The latter are called *continuous* and include the line, surface, body and also time and place. The parts of number and speech do not have a common limit while the parts of a line have a point in common and the parts of a surface, a line. Likewise, the parts of a body can have a surface or plane in common; the past and future in time are both bounded by the now; and the parts of place are continuous, corresponding to the parts of the body that it contains.

The definition of continuous given here is proper to logic for the reason Thomas gives when comparing it to the other definition given in natural philosophy:

Circa primum considerandum est quod *continuum* invenitur a Philosopho dupliciter definitum.

Uno modo definitione formali, prout dicitur in *Praedicamentis* quod continuum est *cuius partes copulantur ad unum communem terminum*: unitas enim continui est quasi forma ipsius.

Alio modo definitione materiali, quae sumitur ex partibus, quae habent rationem materiae, ut dicitur in II *Physicorum*: et sic definitur hic, quod continuum est *quod est divisibile in semper divisibilia*. Nulla enim pars continui potest esse indivisibilis: quia ex indivisibilibus non componitur aliquod continuum, ut probatur in VI *Physicorum*.

Et satis convenienter haec definitio ponitur hic, alia autem in *Praedicamentis*: quia consideratio naturalis versatur circa materiam, consideratio autem logici circa rationem et speciem.<sup>3</sup>

The distinction that Aristotle seems to make in enumerating the species of continuous quantity between line, surface, body on the one hand, and time and place<sup>4</sup> on the other, appears in the discussion of quantity in the fifth book of *Wisdom*:

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<sup>3</sup>In I *De Caelo et Mundo*, Lectio II, n. 9

<sup>4</sup> The way one measures place is like the way the way one measures surface or body, but like time in being an outside measure. Perhaps this is why it is placed after both surface and body and time. But just as the genera of categories seem to be distinguished by something close to questions (for

Sciendum est autem, quod Philosophus in *Praedicamentis* posuit tempus quantitatem per se, cum hic ponat ipsum quantitatem per accidens;

quia ibi distinxit species quantitatis secundum diversas rationes mensurae

Aliam enim rationem mensurae habet tempus, quod est mensura extrinseca, et magnitudo, quae est mensura intrinseca. Et ideo ponitur ibi ut alia species quantitatis.

Hic autem considerat species quantitatis quantum ad ipsum esse quantitatis. Et ideo illa, quae non habent esse quantitatis nisi ex alio, non ponit hic species quantitatis, sed quantitates per accidens, ut motum et tempus.

Motus autem non habet aliam rationem mensurae quam tempus et magnitudo. Et ideo nec hic nec ibi ponitur species quantitatis species.

Locus autem ponitur ibi species quantitatis, non hic, quia habet aliam rationem mensurae, sed non aliud esse quantitatis.<sup>5</sup>

In this text, we should also note Thomas' statement that Aristotle in the *Categories* distinguishes the species of quantity *secundum diversas rationes mensurae*. Hence, when Aristotle wants to show that *logos* or

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example: what is it, how, where) so the species of quantity have a generic likeness to their genus - so two questions: "How much room do you have?" and "How big is the sofa?" The sofa must fit the wall as an exterior measure. Perhaps there is a connection in the way that place is put after time among the species of continuous quantity and *being laid out* after *where* and *when* in the order of the genera of categories. The last has something in common with each of the two before. Possibly the same is true of *to act upon* and *to undergo* being last in the genera of categories if they share something with those which denominate from within and those which denominate from outside.

<sup>5</sup>Thomas Aquinas, *In V Metaphysicorum*, Lectio XV, n. 986

speech is a quantity (which is not as evidently so as number), he points out that it is *measured* by the long and short syllable.

This is proper to logic because a measure is that by which the quantity or size of something is made known to reason and logic considers things insofar as they are in reason. (Some Latin dictionaries give the word *size* as the equivalent of *mensura*.) Hence, just as the logician considers the species or genus of a first substance to be substance (calling it *second substance*) but the wise man who considers things as being does not; so likewise he considers what have a *different measure* to be different species of quantity which the wise man does not when their *being* is not different

And in the concrete name of this Category or highest genus in English, we say *how much* or *how many*; and *how* asks for a definite measure or measurement. (The Greeks and Latins have one word for what is common to *how much* or *how many* as we could use the word *how large* or *how big* for either a crowd that is numbered or a board that is continuous. When we say that this genus is *how much* or *how many*, the word *how* also being out that the much and the many belong to this genus as measured or numbered.

And the reason why Aristotle puts number and discrete quantity before continuous quantity is connected with this. For measure is found first or more perfectly in number since the one is simpler and absolute and indivisible. Moreover, number is more like definition than is a line and therefore closer to substance and the nature of things. (This is also the reason why habit or disposition is given as the first species of quality. For by habit one is well or ill disposed towards one's nature.) A number can be measured by the indivisible one, but a line cannot be measured by the indivisible point. Moreover, any two numbers can always both be measured by one, but two lines do not always have a common measure. It is perhaps significant that Aristotle puts discrete quantity and number in particular before continuous quantity even though their difference is stated affirmatively for continuous quantity and negatively for discrete quantity. (But when he comes to the second difference, he places those whose parts have a position in comparison to each other before those which do not; so that, with the exception of time, continuous quantities are exemplified before number and speech.)

Moreover, the property peculiar to quantity, to be equal or unequal, supposes something that has been measured and by quantities that have a common measure. Hence, a line and a surface cannot be equal or unequal.

This distinction by measure is seen more in the species of discrete and continuous quantity than in the distinction between the discrete and the continuous. For example, we can measure a line by the inch or foot but we cannot measure the square or room in inches or feet. Instead, we must measure it in or by square inches or square feet. And if we are trying to fit a sofa in a room, we might ask separately how long is the sofa and how much room do you have for it.

Why are the species of quantity more distinguished in the *Categories* than those of substance or toward something?

Since measuring is an act of reason (*mens*), it seems more appropriate in logic, the science of reason, to distinguish what can be distinguished by *diversas rationes mensurae*.

Quantity, then, is the measured and the species of quantity are distinguished by their measure. Measure is what separates quantity and the one in the genus of quantity from the one which is convertible with being and the multitude opposed to it:

pluralitas sive multitudo absoluta, quae opponitur uni quod convertitur cum ente, est quasi genus numeri; quia numerus nihil aliud est quam pluralitas et multitudo mensurabilis uno.

Sic igitur unum, secundum quod simpliciter dicitur ens indivisibile, convertitur cum ente. Secundum autem quod accipit rationem mensurae, sic determinatur ad aliquod genus quantitatis, in quo proprie invenitur ratio mensurae.

Et similiter pluralitas vel multitudo secundum quod significat entia divisa, non determinatur ad aliquod genus. Secundum autem quod significat aliquid mensuratum, determinatur ad genus quantitatis, cuius species est numerus.

Et ideo dicit quod numerus est pluralitas mensurata uno, et quod pluralitas est quasi genus numeri.

Et non dicit quod sit simpliciter genus; quia sicut ens genus non est, proprie loquendo, ita nec unum quod convertitur cum ente, nec pluralitas ei opposita. Sed est quasi genus, quia habet aliquid de ratione generis, inquantum est communis.

Sic igitur accipendo unum quod est principium numeri et habet rationem mensurae, et numerum qui est species quantitatis et est multitudo mensurata uno, opponuntur unum et multum, non ut contraria, ut supra dictum est de uno quod convertitur cum ente, et pluralitate sibi opposita; sed opponuntur sicut aliqua eorum quae sunt ad aliquid, quorum scilicet unum dicitur relative, quia alterum refertur in ipsam. Sic igitur opponuntur unum et numerus, inquantum unum est mensura et numerus est mensurabilis.<sup>6</sup>

The second division of quantity is into those having parts that have a position or placing toward each other and those which do not have such a placing or position. In some quantities the parts are laid out toward each other and in other quantities they are not. The same species are separated by this difference as by the previous difference (discrete and continuous) *with one important difference*. Time, although a continuous quantity, does not have parts that are laid out toward each other for the past and the future do not exist together. This also seems to bring in another formal consideration of parts; that is, by how they are united in a whole.

It is possible to divide the same genus into species in more than one way. Number is sometimes divided into odd and even, and sometimes into prime and composite (and perhaps it could also be divided into perfect and imperfect). This is connected with the reason Thomas gives in his commentary on the *Posterior Analytics* why no difference is convertible.

We have seen two divisions by contradictories in the second chapter give rise to four parts. But when we criss-cross two divisions by contradictories, we do not always get four parts. When Aristotle, for example, divides the parts of a plot by the contradictories *before & not before* and *after & not after*, there could not be a part of the plot which is neither before anything nor after anything. Likewise, when we divide quantity by two contradictories, we do not get four parts. A quantity either has parts that have a common limit or not; and it has parts that either have a position toward each other or not. Line, surface, body and place have parts that have a common limit and that have a position toward each other. Number and speech have parts that have neither a common limit nor position toward each other. Time has parts that have a common limit, but not position towards

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<sup>6</sup>Thomas Aquinas, *In X Metaphysicorum*, Lectio VIII, nn. 2090-2093

each other. But there is no quantity whose parts have a position toward each other, but no common limit. This does not seem to be a real possibility.

If Aristotle had divided quantity a second time by the natural differences of divisible forever and not divisible forever, there would have been the same members exactly in both divisions.

Why does Aristotle divide quantity twice and quality only once?

Perhaps there is a special reason for emphasizing quantity having parts in position. We generally say that accidents are individualized by their subject or substance in which they exist. But quantities that have position are individualized by themselves:

Habet autem et hoc proprium quantitas dimensiva inter accidentia reliqua, quod ipsa secundum se individuatur. Quod ideo est, quia positio, quae est *ordo partium in toto*, in eius ratione includitur: est enim quantitas *positionem habens*.<sup>7</sup>

This again brings out the closeness of quantity to substance. And this also perhaps explains why the order of the species is reversed in the second division because, according to this difference, continuous quantities having parts in position toward each other have a special connection with, or likeness to, substance.

And in another passage, Thomas touches upon this closeness of quantity to substance:

Distinguit modos quantitatis; et circa hoc tria facit.

Primo distinguit quantum in id quod est quantum per se, sicut linea, et id quod est quantum per accidens, sicut musicum.

Secundo...distinguit quantum per se; quod quidem est duplex.

Quaedam enim significantur per modum substantiae et subiecti, sicut linea, vel superficies, vel numerus. Quodlibet enim isorum substantialiter est quantum, quia in definitione cuiuslibet ponitur

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<sup>7</sup>*Summa Contra Gentiles*, IV, Caput 65 One should distinguish this *positio* from the *positio* which is a category. The later could perhaps be defined as the *ordo partium in loco*. And what should be said of the *positio* in dispositio? And the *positio* in definition of syllogism?

quantitas. Nam linea est quantitas continua secundum longitudinem divisibile, finita: et similiter est de aliis.

Quaedam vero per se pertinent ad genus quantitatis, et significantur per modum habitus, vel passionis talis substantiae....

Sciendum autem est, quod quantitas inter alia accidentia propinquior est substantiae. Unde quidem quantitates esse substantias putant, scilicet lineam et numerum et superficiem et corpus. Nam sola quantitas habet divisionem in partes proprias post substantiam. Albedo enim non potest dividi, et per consequens nec intelligitur individuare nisi per subiectum. Et inde est quod in sola quantitatis genere aliqua significantur ut subiecta, alia ut passiones.<sup>8</sup>

Moreover, that the divisions include the same species with the exception of time, shows a special place for time. Although time is a continuous quantity, it is also very much the number of something. And like number, its parts have order, but not position. That the parts of time have order is important in the *Categories* because, as we have seen in Thomas, this is a reason why in the last six highest genera, there are two genera connected with place and only one with time. But even more important is that *before* and *after* have their first meaning in time. (And Aristotle exemplifies the second meaning with number where there also is order without position.) There are very important connections between time and reason. Time would not be fully without reason; and the definition of reason as reason is through before and after (As Shakespeare has taught us, reason is the ability to look before and after) and the first sense of before and after is in time. Further, the *Categories* is ordered to the *Peri Hermeneias* and the truth of statements whose formal part is the verb that signifies with time.

After Aristotle has distinguished the species of quantity, he distinguishes quantities through happening from quantities through themselves. The above species are quantities through themselves, and other things are quantified through them and not through themselves. Thus, As Aristotle says, there is much white when the *surface* which is white is large or a trip is long when the *time* it takes is long.

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<sup>8</sup>In *V Metaphysicorum*, Lectio XV, nn. 979-981, 983

Why does he distinguish per and per accidens quantities, but not substances or qualities thus?

Part of the reason is that quantity is the subject of certain qualities and this again brings out the order of these two highest genera.

The first property of quantity given by Aristotle is that it does not have a contrary. Aristotle spends the most time on this property which quantity shares with substance. Some confuse relations that follow upon quantity with quantity and Aristotle speaks at some length to refute this mistake. Large and small, for example, might seem to be contrary quantities, but they belong to the genus relation or towards something. The same quantity can be called large and small, but towards other things. If they were contraries, contraries would belong to the same thing at the same time, and something would be contrary to itself.

Aristotle seems to exclude place from this property. Yet the definition of contraries seems to get its words from place because we say that contraries are the species *furthest apart* in any genus.

The second property of quantity is also shared with substance (This again will show that quantity is closer to substance than quality) and follows upon the first property. One quantity is not more or less than another. One three is not more or less three than another. One three foot line is not more or less three feet long than another.

The third property of quantity is to be equal or unequal. This is a property in a more strict sense of the word than the first two properties.

## APPENDIX

There is a connection between number and the continuous:

...secundum Avicennam, tract. III *Metaph.*, cap. V, unitas et numerus quae considerat arithmeticus non sunt illa unitas et multitudo quae inveniuntur in omnibus entibus; sed solum

secundum quod inveniuntur in rebus materialibus, secundum quod pluralitas causatur ex divisione continui; ex hoc enim possunt inveniri omnes illae passionis in numeris quas arithmetici demonstrant, sicut multiplicatio et aggregatio, et hujusmodi, quae fundantur supra divisionem infinitam continui. Unde est infinitas in numero, secundum Philosophum, III *Physic*, text 55, et ideo etiam talis unitas est potentia omnis numerus.<sup>9</sup>

Is the number which is a species of quantity, numbering number or numbered number? If numbering number is the same as *numerus absolutus* in the following text and *non enim numerus absolutus a rebus numeratis est nisi in intellectu*, and the categories are a division of being outside the soul or reason, then the number which is a species of quantity would be *numerus qui est in rebus numeratis*. Time is also a numbered number.

4. Praeterea. ubicumque est numerus, ibi est totum et pars. Si igitur in Deo sit numerus personarum, erit in Deo ponere totum et partem: quod simplicitati divinae repugnat.

ad quartum dicendum quod numerus est duplex: scilicet numerus simplex vel absolutus, ut duo et tria et quatuor; et numerus qui est in rebus numeratis, ut duo homines et duo equi.

Si igitur in divinis accipitur numerus absolute sive abstracte, nihil prohibet in eo esse totum et partem: et sic non est nisi in acceptione intellectus nostri; non enim numerus absolutus a rebus numeratis est nisi in intellectu.

Si autem accipiamus numerum prout est in rebus numeratis, sic in rebus quidem creatis, unum est pars duorum, et duo trium, ut unus homo duorum, et duo, trium: sed non est sic in Deo, quia tantus est Pater quanta tota Trinitas, ut infra patebit.<sup>10</sup>

On the other hand, a number like *two men* or *two horses* seems to involve more than one highest genus. Moreover, logic considers things insofar as they are in reason and abstract number is in reason only. In another text,

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<sup>9</sup> Thomas Aquinas, *Scriptum Super Lib. I Sententiarum*, Dist. XXIV, Quaest I, Art. I, Ad 2

<sup>10</sup> *Summa Theologiae*, Prima Pars, Q. XXX, Art. I, 4 & Ad 4

Thomas compares the foundation in things which what is known by mathematical abstraction has with logical intentions such as genus:

ipsa conceptio intellectus tripliciter se habet ad rem quae est extra animam.

Aliquando enim hoc quod intellectus concipit, est similitudo rei existentis extra animam, sicut hoc quod concipitur de hoc nomine "homo" et talis conceptio intellectus habet fundamentum in re immediate, inquantum res ipsa, ex sua conformitate ad intellectum, facit quod intellectus sit verus, et quod nomen significans illum intellectum proprie de re dicatur.

Aliquando autem hoc quod significat nomen non est similitudo rei existentis extra animam, sed est aliquid quod consequitur ex modo intelligendi rem quae est extra animam; et hujusmodi sunt intentiones quas intellectus noster adinvenit, sicut significatum hujus nominis "genus" non est similitudo alicujus rei extra animam existentis; sed ex hoc quod intellectus intelligit animal ut in pluribus speciebus, attribuit ei intentionem generis; et hujusmodi intentionis licet proximum fundamentum non sit in re, sed in intellectu, tamen remotum fundamentum est res ipsa. Unde intellectus non est falsus, qui has intentiones adinvenit. Et simile est de omnibus aliis qui consequuntur ex modo intelligendi, sicut est abstractio mathematicorum et hujusmodi.

Aliquando vero id quod significatur per nomen, non habet fundamentum in re, neque proximum, neque remotum, sicut conceptio chimerae: quia neque est similitudo alicujus rei extra animam, neque consequitur ex modo intelligendi rem aliquam vere: et ideo ista conceptio est falsa.

Unde patet secundum, scilicet quod ratio dicitur esse in re, inquantum significatum nominis, cui accedit esse rationem, est in re: et hoc contingit proprie quando conceptio intellectus est similitudo rei.<sup>11</sup>

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<sup>11</sup> *Scriptum Super Lib. I Sententiarum*, Dist II, Q. 1, Art. III, Solutio

The unity of number is difficult to understand. Here are some texts that touch upon the problem of the unity of number and the solution of the problem.

*Scriptum Super Lib. I Sententiarum*, Dist. XXIV, Quaest I, Art. II, Ad 3 & Ad 4:

Ad tertium dicendum, quod aggregatio et huiusmodi sunt passiones numeri qui consequitur divisionem continui, ut Avicenna dicit, tract. III *Metaph.*, cap. V; et hunc numerum constat in Deo non esse.

Ad quartum dicendum, quod in numero absoluto pluralitas habet quamdam compositionem et aggregationem, quae est minus certa quam unum, quod est principium ipsius; et ideo non solum quantum ad intellectum, sed etiam quantum ad rem est mensurabilitas multitudinis talis per unitatem.

Sed in numero relationum vel personarum non est aliquis ordo certitudinis vel compositionis in re; et ideo numerus in Deo non est multitudo mensurata, nisi forte secundum acceptionem intellectus tantum, qui componit etiam quae composita non sunt secundum quod diversa ex eis intelligit, secundum quod etiam propositiones affirmativas in divinis format.

In this text, Thomas speaks of number as a *heaping up* (*coacervatio*) of those distinct in their nature

2. Praeterea, sicut quantitas continua integratur ex suis partibus, ita et numerus. Sed in divinis est numerus personarum, scilicet ternarius, cujus quaedam pars est unum et duo. Ergo videtur quod sit ibi totum integrale.

Ad secundum dicendum, quod in divinis unitas vel dualitas non est pars ternarii nisi secundum rationis acceptionem. Cujus ratio est, quia alio modo est numerus in rebus divinis et in rebus creatis, et alio modo unitas. Cum enim unum sit quod est indivisum in se et divisum ab aliis, unumquodque autem creatum per essentiam suam distinguatur ab aliis; ipsa essentia creati, secundum quod est indivisa in se et distinguens ab aliis, est unitas ejus, et plures unitates constituentes numerum personarum creatarum, sunt

plures essentiae congregatae secundum numerationem, ita quod nihil est in una quod sit in alia secundum numerum idem. Sic ergo numerus in rebus creatis habet rationem distinctionis et cujusdam coacervationis distinctorum per essentiam, et ex hoc habet rationem totius integralis. Unitas autem personalis est ipsa proprietas relativa distinguens unam personam ab alia, et non essentiam ipsius personae; unde tres personae non sunt differentes per essentiam, cum una numero essentia sit in tribus personis. Et ideo non potest ibi esse coacervatio, sed tantum distinctio. Et propter hoc numerus non habet rationem totius integralis, nisi forte secundum quod in ratione coadunantur rationes proprietatum personalium. Sed per hoc non erit integratio alicujus rei, sed in ratione tantum.<sup>12</sup>

And in this text, Thomas speaks of the ones as not being simply one and therefore a species if they are heaped up:

Cum enim componatur ex multis unitatibus, aut non est unus simpliciter, sed unitates aggregantur in eo per modum coacervationis, quae non facit simpliciter unum, et per consequens nec ens in aliqua specie constituunt: et sic numerus non est aliqua species entis; aut si numerus est unus simpliciter, et non per seipsum, dicendum et quid facit eum unum ex multis unitatibus: quod non est assignare.<sup>13</sup>

Dionysius, as Thomas explains, sees that number, even though it is in some way opposed to the one, partakes of unity:

Quod autem omnia participant uno, probat per id de quo minus videtur, scilicet per numerum qui quodammodo opponitur uni, sicut divisum indiviso: *omnis enim numerus participat* uno sive numerus accipiatur secundum se, ut significatur cum dicitur binarius vel ternarius sive accipiatur numerus secundum quod denominat aliquam partem, ut cum dicimus dimidium vel tertium vel decimum.<sup>14</sup>

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<sup>12</sup>*Scriptum Super Lib. I Sententiarum*, Dist. XIX, Quaest IV, Art. I, *Utrum in divinis sit totum integrale*, Obj. 2 & Ad 2

<sup>13</sup>*In VIII Metaphysicorum*, Lectio III, n. 1725

<sup>14</sup>*In Librum Beati Dionysii De Divinis Nominibus Expositio*, Caput XIII, Lectio II, n. 974

Thomas explains that simply and properly only those things which come together *univocally* in something one can be numbered together:

...quamvis Deus et creatura non convenient in aliquo uno secundum aliquem modum convenientiae, tamen est considerare communitatem analogiae inter Deum et creaturam, secundum quod creaturae imitantur ipsum prout possunt. Unde aliquo modo potest connumerari aliis rebus, ut dicatur quod Deus et angelus sunt duae res, non tamen simpliciter et proprie, sicut creaturae ad invicem connumerantur, quae univoce in aliquo uno conveniunt. Et ex hoc non sequitur quod Deus sit pars alicujus, vel quod Deus et angelus sint aliquid majus quam Deus; sed quod sint plures res.<sup>15</sup>

This raises incidentally the question whether the number ten of the categories, or highest genera, is a number which is a species in the category of quantity. For the ten genera do not come together univocally in something one.

In another passage, Thomas adds to coming together in one species or genus what comes together in some *order*:

*unum existens, quod est in genere creaturarum, est numerabile, idest quaedam pars numeri: omne enim quod est unum in creaturis, connumeratur alteri cum quo convenit aut specie aut genere aut in aliquo ordine.*<sup>16</sup>

A similar problem arises about the parts of a definition:

Ex pluribus enim actu existentibus non fit unum simpliciter, nisi sit aliquid uniens et aliquo modo ligans ea ad invicem.

Sic ergo, si secundum diversas formas Socrates esset animal et rationale, indigerent haec duo, ad hoc quod unirentur simpliciter, aliquo quod faceret ea unum. Unde cum hoc non sit assignare, remanebit quod homo non erit unum nisi aggregatione;

sicut acervus, qui est secundum quid unum et simpliciter multa.

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<sup>15</sup> *Scriptum Super Lib. I Sententiarum*, Distinctio XXIV, Quaest I, Art. I, Ad 4

<sup>16</sup> *In Librum Beati Dionysii De Divinis Nominibus Expositio*, Caput XIII, Lectio III, n. 991

Et ita etiam non erit homo ens simpliciter, quia unumquodque in tantum est ens, in quantum est unum.<sup>17</sup>

And in another text:

Et secundum hunc modum Democritus recte dicit, quod impossibile est unum fieri ex duobus, et ex uno fieri duo. Est enim intelligendum, quod duo in actu existentia, nunquam faciunt unum. Sed ipse non distinguens inter potentiam et actum, posuit magnitudines indivisibiles esse substantias. Voluit enim, quod sicut in eo quod est unum, non sunt multa in actu, ita nec in potentia. Et sic quaelibet magnitudo est indivisibilis.

Vel aliter. Recte, inquam, dixit Democritus, supposita sua positione, qua ponebat magnitudines indivisibiles esse etiam rerum substantias, et sic semper esse in actu, et ita ex eis non fieri unum.

Et sicut est in magnitudinibus, ita est in numero, si numerus est compositio unitatum, sicut a quibusdam dicitur. Oportet enim quod vel dualitas non sit unum quid, sive quicumque alius numerus, sive quod unitas non sit actu in ea. Et sic dualitas non erunt duae unitates, sed aliquid ex duabus unitatibus compositum. Aliter numerus non esset unum per se et vere, sed per accidens, sicut quae coacervantur.<sup>18</sup>

In this text, Thomas sees the unity of number and syllable in order:

compositum quandoque sortitur speciem ab aliquo uno quod est forma, ut patet in corpore mixto; vel compositio ut patet in domo; vel ordo, ut patet in syllaba et numero. Et tunc oportet quod totum compositum sit unum simpliciter.

Quandoque vero compositum sortitur speciem ab ipsa multitudine partium collectarum, ut patet in acervo et populo, et aliis huiusmodi: et in talibus totum compositum non est unum simpliciter, sed solum secundum quid.<sup>19</sup>

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<sup>17</sup>Thomas Aquinas, *Quaestio Disputata de Anima*, Art. 11, corpus

<sup>18</sup>*n VII Metaphysicorum*, Lectio XIII, n. 1589

<sup>19</sup>*In VII Metaphysicorum*, Lectio XVII, n. 1673

DIVISION OF CHAPTER SIX ON QUANTITY

Quantities per se and per accidens

Quantities per se

Two divisions of quantity into its species

Species of the first division defined, divided into their species, and definition shown to belong to each of the species

Definition of discrete quantity, its species, and that definition fits each species

Definition of continuous quantity, its species, and that definition fits each species

Species of the second division (into those having or not having position) divided into their species

Quantities per accidens distinguished from those per se

The properties of quantity

Does not have a contrary

Is not said more or less

Equal or unequal

Duane H. Berquist