NOTE FOR BOOK ONE, READING THIRTEEN

In this Reading, Aristotle teaches perhaps three things that have not been shown before and he also brings together what has been taught here and in some previous readings, showing how these things can be said and summarized in various ways.

The first new teaching here is that of the three things found in every becoming only two are causes *as such* or *through themselves* of what comes to be. When we examine and take apart by reason what comes to be, we see that it is put together from the underlying subject or matter which remains in the becoming and the form or act it has acquired in the becoming. The contrary or opposite of the form has been lost and is not a part of what has come to be. Hence it is not an intrinsic cause of what comes to be. (We could add that it is not an extrinsic cause either for the contrary is opposed to what comes to be rather than making it or being its end.) Thus when the butter is put into the refrigerator, what comes to be is hard butter. If we take apart by reason hard butter, we see that it includes butter and hardness. The softness, from which the becoming began, isn't a part of what has come to be. (Nor did the softness make the butter hard.) Likewise, when the sick man becomes healthy. What has comes to be is a healthy man. If we take apart by reason a healthy man, we can see that it involves a man and health. But the contrary sickness is not part of the healthy man. (Nor did the sickness make the man healthy.)

Aristotle then points out that what is said to become something is one in subject but two in definition. We can say, for example, that the man becomes healthy and the sick becomes healthy. We are not talking of two subjects becoming healthy because in that case we would have two healthy ones at the end of the becoming. Rather the one subject of becoming is defined or described in two ways, as man and as sick. But one (man) is what as such or through itself becomes healthy and the other (sick) is said to become healthy only because it *happens* to what as such becomes healthy.

Aristotle then shows on the basis of the teaching not only in this Reading, but also on that in Readings Ten and Eleven, the ways in which we can say that the beginnings are two or three. If we take, for example, the contraries concretely, we might say there are only two things in change, such as the hard and the soft. But if we distinguish the hardness and the softness purely or abstractly from their subject, there are three things in every change. Likewise, we saw in

reading Twelve that we can speak of three things in every becoming. But now we see that there are only two beginnings if we speak of the causes *as such* of what comes to be.

In showing how we can speak truly or correctly of both two and three beginnings here, Aristotle is giving us an important addition to the Rule of Two or Three. Reason usually divides or distinguishes into two or three. Hence, reason often seeks to know whether it should divide into two or into three. But there are many things that can be divided correctly into two and into three. And there are various ways in which this can take place. Sometimes, for example, we might say that there are only two kinds of philosophy: looking and practical. At other times, we might say there are three kinds, adding logic to the above two. Was it incorrect then to speak before of there being only two kinds of philosophy? No, because there are only two *chief* or *principal* parts of philosophy. But if we wish to include the *tool* of philosophy, which is logic, as part of philosophy (although not a chief part), we can say there are three parts. We could divide name said of many things into two or three. We could say that a name is said of many things either univocally or equivocally. That is, it is either said of many things with the same meaning in mind when said of each or with other meanings in mind when said of each. The name said equivocally of many things can be divided again into two either by chance or by reason. In the former there is no connection or order among the meanings, no reason why they should have the same name, but in the other, there is a connection or order among the meanings and therefore a reason why they have the same name. But sometimes Thomas divides *name said of many things* into three. Either it is said with exactly the same meaning when said of each (univocally) or it is said with entirely different meanings of each (equivocally or purely equivocally), or it is said with meanings partly the same and partly different of each (analogously). A statement can be divided into noun and verb or it can be divided into subject, predicate and copula. A plot can divided into beginning, middle and end or into the tying of the knot and the untying of the knot. Government can be divided into rule by the one or by the few or by the many. It can also be divided into just and unjust. There are many reasons why we sometimes divide the same thing into two and into three, but we cannot go into this now.

Next Aristotle teaches us that change is not always between contraries or their intermediaries. And here he seems to correct a bit what was said in the Tenth Reading. Contraries, strictly speaking, are the species or forms furthest apart in

the same genus. But here Aristotle teaches us that becoming is not always from the contrary *form*. Sometimes it begins merely from the *lack* of a form.

This is most easily seen in human things. When a man becomes virtuous, he does not always start from being vicious. Vice is the contrary of virtue. They are both in the genus of habit and are the habits furthest apart. If I bring up a boy or girl to be just, they may come to have the virtue of justice without ever having had the vice of injustice. But if I try to reform the criminal in prison, I would be starting from the contrary vice. Now it is easier or more possible to bring up a boy or girl to be just than it is to reform the criminal. For the criminal has a real habitual inclination to the opposite of virtue and will resist one in the way the boy or girl will not. Likewise, it is easier to bring a girl up to be chaste than to make chaste a prostitute because the latter is habitually inclined to the opposite of the virtue and will resist becoming chaste much more than the girl who merely lacks the virtue in the beginning.

Likewise, to convince someone of your opinion, he does not have to have first a contrary opinion. He may merely lack your opinion. And it is easier to convince him if he has no opinion than if he has the contrary opinion.

Likewise, the teacher teaches someone who does not know the truth yet, but that person is not necessarily mistaken. The man who is mistaken about something, thinks falsely about it. His thinking is contrary to the true thinking. But some student might be merely ignorant of what is true without thinking anything false about it. The slave-boy in the *Meno* is mistaken about how to double a square. But not everyone who learns how to double a square is mistaken about it first. He may merely be ignorant of it. Socrates' first conversation with the slave-boy (in which he shows the slave-boy that he is mistaken) would be unnecessary if he was merely ignorant.

In teaching us that change may not always start from the contrary form, but sometimes from merely the lack of the form to be acquired, Aristotle is also bringing out what is necessarily found at the beginning of coming to have a form. One necessarily lacks that form. Even the one who has the contrary form, necessarily lacks the form he is going to come to have. But the one who lacks the form he is going to come to have does not necessarily have also the contrary form. Hence, we see how in Reading Ten Aristotle was not determining the truth with complete necessity, but with some necessity and some probability. One may usually have the contrary form, but one necessarily lacks the form he is going to come to have.

After this, Aristotle comes to the most difficult thing to understand in the First Book of *Natural Hearing*. This is the first matter, the matter or subject underlying change of substance.

Before trying to understand something, it is perhaps necessary to know how to understand it.

Aristotle teaches us that the first matter can be known only by a proportion; that is, by a likeness of ratios.

What is the reason for this? And what is the proportion by which the first matter can be known?

Ability is knowable only by the act for which it is an ability. But the first matter by itself is only ability. Therefore, it is not knowable by itself.

The first matter is to man and dog (or any other material substances) as clay is to sphere and cube.

In order to understand a proportion, it is necessary to know in what way the two ratios are alike.

If we say, for example, that four is to six as two is to three, it would be to *misunderstand* the proportion if we think that as two is an even number and three, an odd number, so four must be an even number and six an odd number. The likeness is not in this that as one is the ratio of an even number to an odd number, so is the other ratio. Likewise, if someone thought that as two is to three is the ratio of a prime number to a prime number, so the ratio of four to six is the ratio of a prime number to a prime number.

Rather the likeness consists in this. Four is the same parts of six that two is of three. If we think that six is three two's and four is two of these three parts, the we can understand how it is like two and three. For just as two is two of the three parts of three, so likewise, four is two of the three parts of six.

So in what way is the ratio of the first matter to man and dog, like the ratio of clay to sphere and cube?

At first we see many differences. Man and dog are two substances while sphere and cube differ only accidentally. The two shapes are accidents. And clay is an actual substance while the first matter is not. In what way then are these two ratios alike?

But just like the clay is *able to be* a sphere or a cube, but not at the same time, so likewise the first matter is *able to be a man or a dog,* but not at the same time.

And as the clay when it is actually a sphere is able to be a cube, but when it becomes a cube it is no longer a sphere; so the first matter when it is a man is able be a dog, but when it becomes actually a dog, it is no longer a man.

Thus the first matter, considered by itself, although it never could exist by itself, is pure ability. It is obviously not an actual substance. And clearly accident cannot exist as underlying substance. Hence, it is substance in ability and consequently pure ability. It is ability, of course, in the passive sense; the ability to be or to be a substance. This is also why it cannot be known by itself for ability is knowable only by its order or relation to act.

In the following text, Thomas says that changes comes to be from opposites, speaking per se:

> ...solum ex oppositis, per se loquendo, fiunt mutationes, ut probatur in primo Physicorum. Ex nigro enim aliquid fit album per se loquendo. Dulce autem non fit ex nigro nisi per accidens, inquantum dulce convenit esse album.[1]

This does not mean that one opposite as such becomes the other for one opposite as such cannot be the other and therefore as such cannot come to be it. But one can say that change is between opposites as such.

In the following text, Thomas distinguishes the kinds of the two terms which are found in every coming to be or change:

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[1] *In X Metaphysicorum,* Lectio IX, n. 2101

In qualibet enim generatione vel mutatione est duos terminos invenire; scilicet terminum a quo, et terminum ad quem. Uterque autem diversimode invenitur in diversis.

In quibusdam enim terminus a quo est aliquid contrarium perfectioni acquirendae; sicut nigredo est contraria albedini, quae per dealbationem acquiritur.

Quandoque vero perfectio acquirenda non habet contrarium directe; sed praecedunt in subiecto dispositiones quae sunt contrariae dispositionibus ordinantibus ad perfectionem inducendam, sicut in corporis animatione.

Quandoque vero nihil praesupponitur nisi privatio sive negatio introducendae formae; sicut in aere iluminando praecedunt tenebrae, quae per lucis praesentiam removentur.

Similiter etiam terminus ad quem, quandoque est unus tantum, ut in dealbatione terminus ad quem est albedo;

quandoque vero sunt duo termini ad quem, quorum unus ad alium ordinatur, sicut patet in alteratione elementorum, cuius terminus unus est dispositio quae est necessitas, alius autem ipsa forma substantialis.

In acceptione igitur cognitionis quantum ad terminum a quo invenitur praedicta diversitas, quia quandoque in accipiente scientiam praeexistit error contrarius scientiae acquirendae;

quandoque vero dispositiones contrariae, sicut impuritas animae, aut immoderata occupatio circa res sensibiles vel aliquid aliud;

quandoque vero praeexistit solummodo cognitionis privatio vel negatio, sicut cum in cognitione de die in diem proficimus...

Ex parte autem termini ad quem est invenire in acceptione cognitionis duos terminos. Primus est id quo intellectus perficitur ad aliquid cognoscendum; sive sit forma intelligibilis, aut lumen intelligibile, vel quodcumque cognitionis medium. Secundus autem

> terminus est ipsa cognitio, quae exinde procedit, quae est ultimum in acceptione cognitionis.[2]

In the following text, Thomas speaks of the introduction of a new form and the elimination of the contrary form or lack as one in subject, but two in definition:

> illuminatio et purgatio se habent in acquisitione scientiae angelicae sicut generatio et corruptio in acquisitione formae naturalis; quae quidem sunt unum subiecto, differunt autem ratione.[3]

But he still sees an order among the two:

> effectus enim positivi alicuius formae ordine naturae praecedunt effectus privativos. Non enim lumen pellit tenebras nisi per hoc quod illuminat. Et ita gratia per hoc culpam pellit, quod iustificat. Remoto antem priori, removetur posterius.[4]

In this text, Thomas points out that the first matter, although in ability to all the substantial forms, receives them in a certain order:

> Quamvis autem generatio fiat ex non ente quod est in potentia, non tamen fit quodlibet ex quocumque; sed diversa fiunt ex diversis materiis. Unumquodque enim generabilium habet materiam determinatam ex qua fit, quia formam oportet esse proportionatam materiae. Licet enim materia prima sit in potentia ad omnes formas, tamen quodam ordine suscipit eas. Per prius enim est in potentia ad formas elementares. Et eis mediantibus secundum diversas proportiones commixtionum est in potentia ad diversas formas: unde non potest ex quolibet immediate fieri quodlibet, nisi forte per

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[2] *De Veritate*, Q. 9, Art. 3, c
[3] *De Veritate*, Q. 9, Art. 3, Ad 3
[4] *Ad Romanos*, IV, Lectio II, n. 350

> resolutionem in primam materiam. Et hoc est contra Anaxagoram qui posuit quod quodlibet fit ex quolibet.[5]

And another text where Thomas illuminates this order in which the first matter is in ability to diverse forms:

> In actibus autem formarum gradus quidam inveniuntur. Nam materia prima est in potentia primo ad formam elementi. Sub forma vero elementi existens est in potentia ad formam mixti: propter quod elementa sunt materia mixti. Sub forma autem mixti considerata, est in potentia ad animam vegetabilem: nam talis corporis anima actus est. Itaque anima vegetabilis est in potentia ad sensitivam; sensitiva vero ad intellectivam. Quod processus generationis ostendit: primo enim in generatione est fetus vivens vita plantae, postmodum vero vita animalis, demum vero vita hominis.[6]

The following is a text where Thomas brings out the likeness and difference of substantial form and accidental form and something of their order:

> forma substantialis et accidentalis partim conveniunt, et partim differunt.
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> Conveniunt quidem in hoc, quod utraque est actus, et secundum utramque est aliquid quodammodo in actu.
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> Differunt autem in duobus.
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> Primo quidem, quia forma substantialis facit esse simpliciter, et eius subiectum est ens in potentia tantum. Forma autem accidentalis non facit esse simpliciter; sed esse tale, aut tantum, aut aliquo modo se habens: subiectum enim eius est ens in actu.
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> Unde patet quod actualitas per prius invenitur in forma substantiali quam in eius subiecto: et quia primum est causa in quolibet genere, forma substantialis causat esse in actu in suo subiecto.

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[5] *In XII Metaphysicorum*, Lectio II, n. 2438

[6] *Summa Contra Gentiles,* Liber III, Caput 22

> Sed e converso, actualitas per prius invenitur in subiecto formae accidentalis, quam in forma accidentali: unde actualitas formae accidentalis causatur ab actualitate subiecti. Ita quod subiectum, inquantum est in potentia, est susceptivum formae accidentalis: inquantum autem est in actu, est eius productivum.
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> Et hoc dico de proprio et per se accidente: nam respectu accidentis extranei, subiectum est susceptivum tantum; productivum vero talis accidentis est agens extrinsecum.
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> Secundo autem differunt substantialis forma et accidentalis, quia cum minus principale sit propter principalius, materia est propter formam substantialem; sed e converso, forma accidentalis est propter completionem subiecti...
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> accidens causaur a subiecto secundum quod est actu, et recipitur in eo inquantum est in potentia.
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> Ad secundum dicendum quod subiectum est causa proprii accidentis et finalis, et quodammodo activa; et etiam ut materialis, inquantum est susceptivum accidentis. Et ex hoc potest accipi quod essentia animae est causa omnium potentiarum sicut finis et sicut principium activum; quarumdam autem sicut susceptivum.
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> Ad tertium dicendum quod emanatio propriorum accidentium a subiecto non est per aliquam transmutationem; sed per aliquam naturalem resultationem, sicut ex uno naturaliter aliud resultat, ut ex luce color.[7]

And in the following text, Thomas will distinguish three kinds of composition in things, including the distinction between the composition of the two forms and their subject or matter:

> ...compositio philosophica et naturalis est multiplex.

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[7] *Summa Theologiae,* Prima Pars, Q. 77, Art. 6, c.

Est enim compositio mixti ex elementis; et in hac compositione loquitur Philosophus quod oportet formam mixti esse aliam omnino ab ipsis elementis.

Est etiam compositio formae substantialis et materiae, ex qua resultat tertium, scilicet forma speciei: quae quidem non est aliud omnino a materia et forma, sed se habet ad eas ut totum ad partes.

Est etiam compositio subiecti et accidentis in qua non resultat aliquid tertium ex utroque: et talis est compositio potentiae et habitus.[8]

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[8] *De Veritate,* Q. 16, Art 1, Ad 16