C. J. F. WILLIAMS  
_Lecturer in Philosophy, University of Hull_

ARISTOTLE AND CORRUPTIBILITY

A DISCUSSION OF ARISTOTLE, _De Caelo_ I, xii

**PART I**

In a discussion-note in _Mind_ (July 1958), Father P. M. Farrell, O.P., gave an account, in what he admitted¹ to be an embarrassingly brief compass, of the Thomist doctrine concerning evil. There is one sentence in this discussion which at first glance appears paradoxical. Father Farrell has been arguing that a universe containing ‘corruptible good’ as well as incorruptible is better than one containing ‘incorruptible good’ only. He continues: ‘If, however, they are to manifest this corruptible good, they must _be_ corruptible and _they must sometimes corrupt._² The final words, despite Father Farrell’s italics, strike one as expressing, not a self-evident truth, but a _non sequitur_. The fact that I am capable of committing murder does not entail that I will at some time commit it. It is not immediately obvious that a similar entailment holds in the case of corruption and corruptibility.

Father Farrell’s statement has its source in a remark of Aquinas in Question 48 of the _Prima Pars_ of the _Summa Theologiae_, article 2, corp.:

*Ita perfectio universi requirit ut sint quaedam quae a bonitate deficere possint; ad quod sequitur ea interdum deficere._³

Aquinas’s dictum is no more supported in this place by argument or explanation than is Father Farrell’s remark: both authors are, after all, attempting a summary.⁴ One is referred, however, to a passage in Aquinas’s Commentary on the _De Caelo_ of Aristotle where this view is somewhat less baldly stated:

_Impossible est id quod est corruptibile quandoque non corrumpi. Quia si quandoque non corrumpetur, potest non corrumpi, et ita erit incorruptibile._⁵

¹ P. 400.
² P. 402. Prof. Mackie, whom Fr Farrell was criticising, replied in _Philosophy_, vol. xxxvii (1962), and addressed himself particularly to the point in question on pp. 155-6.
³ I am grateful to Fr Farrell for supplying me with the references to Aquinas, and also to his confrères, Frs Edward Booth and P. T. McKenna, O.P., who have corresponded with me on this question and supplied much useful material, and whose disagreement with my conclusions has been most stimulating. Mr B. F. McGuinness, Mr P. T. Geach and Mr T. C. Potts were also kind enough to read an earlier draft of this paper and to send me helpful criticisms.
⁴ A similarly unsupported statement occurs in the _tertia via_ (S.T. i, qu. 2, a. 3) and was discussed by me in _The Philosophical Quarterly_ (Oct. 1961), p. 357.
⁵ In lib. I, _De Caelo et Mundo_, lectio xxix, n. 8.
Again the concluding words are startling. Has Aquinas simply confused
\( \text{potest non corrumpi} \) with \( \text{non potest corrumpi} \)?

Reference to the original text of Aristotle upon which Aquinas is comment-
ing shows that his first sentence is a straight translation of Aristotle’s thesis:
\( \alpha\delta\omicron\upsilon\pi\alpha\tau\omicron\nu \phi\beta\alpha\rho\tau\omicron\nu \delta\nu \mu\eta \phi\beta\alpha\rho\eta\mu\alpha\iota \pi\omicron\tau\epsilon \) (283 a 25); but it does not seem that
Aristotle has any remark at this stage of his argument corresponding to the
suspicious transition we noted in Aquinas from \( \text{potest non corrumpi} \) to \( \text{erit incorr uptibile} \). Aristotle’s statement, however, comes towards the end of a long
and complicated chapter, and cannot be viewed in isolation from its context.
The same may be said of Aquinas’s words, and it is necessary to suspend
judgment on the suspected confusion until chapter 12 of Book I of the \( \text{De}
Caelo} \), and its four attendant \textit{lectiones} in Aquinas’s Commentary, have been
examined more thoroughly.

This proves to be no mean task. For complication, if not for length, \( \text{De}
Caelo} \) I, xii, is scarcely rivalled, even by other parts of the Aristotelian corpus.
This complication is accompanied by, if it is not causally related to, a number
of logical errors, which it is the purpose of this paper to expose. The chapter as
a whole is designed to show ‘ungenerated’ and ‘incorruptible’ are con-
vertible, and accordingly that the world (\( \text{Οὐρανός} \) in one of its senses, as
Aristotle explicitly says at 278 b 20, means the world as a whole, \( \tau\omicron \delta\gamma\omicron\kappa\alpha\iota \tau\omicron \pi\acute{\alpha} \nu \) is both ungenerated and incorruptible, \( \alpha\gamma\epsilon\nu\pi\omicron\tau\omicron\sigma\quad \alpha\phi\beta\alpha\omicron\tau\omicron\sigma\). It is
led up to by the two preceding chapters which discuss, respectively, the pre-
vious views of philosophers on the subject, and the meaning of the terms
\( \alpha\gamma\epsilon\nu\pi\omicron\tau\omicron\sigma\quad \alpha\phi\beta\alpha\omicron\tau\omicron\sigma\). These words are usually translated by ‘ungenerated’
and ‘incorruptible’; but the English words do not plausibly admit the subtle
distinctions of meaning which Aristotle finds in (or introduces into) the usage
of the corresponding Greek words. The discussions contained in these intro-
ductive chapters, 10 and 11, I shall not examine in detail, only referring
back to them where the argument of chapter 12 requires.

This argument falls into two parts: the first is concerned to prove the theses
that what is eternal is both incorruptible and ungenerated; the second deals
with the converse of each of these propositions, or, what amounts to the same
thing, with the thesis that \( \alpha\gamma\epsilon\nu\pi\omicron\tau\omicron\sigma\quad \alpha\phi\beta\alpha\omicron\tau\omicron\sigma\) are mutually implica-
tive. It is this latter thesis which, as we have said, is the principal doctrine
expounded in \( \text{De Caelo} \) I, x–xii. It is a part of Aristotle’s cosmological teaching
conspicuously opposed to Plato’s, to the view, namely, that the world, though
imperishable, had a beginning in time. The question that may well be asked
is, what is the relevance to this particular point of cosmology of the theses
which the earlier part of chapter xii seeks to establish. Why is it necessary,
in order to prove that the incorruptible is ungenerated, to show first that the
eternal is neither corruptible nor capable of generation?

The transition from the earlier to the later part of the argument presents
difficulties. It is hard not only to understand the chain of reasoning involved,
but also to decide where to locate the change from the first to the second part of the argument. There is an intermediate passage, 282 a 5–25, which different commentators assign to different parts of the argument. The difference of opinion goes back to the Greek commentators: Alexander of Aphrodisias believed that it was part of the argument for the mutual implication of \( \gamma e \eta \tau o s \) and \( \phi \theta a r t o s \); Simplicius that it belonged to the demonstration that \( \acute{\alpha} \pi a n \tau o \acute{\alpha} \acute{\epsilon} i \varsigma \) \( \acute{o} \acute{\pi} \lambda \acute{\alpha} \varsigma \) \( \acute{\alpha} \phi \theta a r t o n \). I incline to the latter view, with the reservation that Aristotle’s confusion at this point may be such that even he could not decide which was the correct way of dividing the text. I accordingly discuss 282 a 5–25 in the first part of my paper, which is concerned with the incorruptibility of the eternal, the doctrine to which Father Farrell has recently appealed.

In this part of the paper I shall consider De Caelo I, xii as far as 282 a 25 entirely on its own merits. In the second part I shall attempt to deal with its relation both to chapters x–xii as a whole and to other works of Aristotle, as well as with the exegesis of the rest of the chapter. The place in Aristotle’s teaching of the view that ‘every possibility must be realised at some moment in time’ has been discussed in two recent articles by Professor Jaakko Hintikka.1 This thesis, as Hintikka is aware, is equivalent to the thesis maintained in the first part of the chapter with which we are concerned. I shall leave it to the second part of my paper to discuss to what extent this chapter relaxes for support on other passages in Aristotle or they on it. I shall proceed first to a detailed exegesis of this part of the chapter itself.

1. The first section of chapter 12, \( \Delta i o \omega r a m \epsilon e n o n \ \delta e \ \tau \omega \tau \omega \rho o n \) (281 a 28) … \( \alpha \lambda \lambda a \ \tau \omega \tau \prime \ \dot{ \alpha } \dot{ \delta } \nu \alpha \tau o n \) (281 b 2), applies the rule laid down in the previous chapter (281 a 7 sqq.) that in attributing a certain power or ability to a thing it is necessary to determine the limits of this power. We do not say that a thing can lift weights—just like that—but that it can lift weights as heavy as a hundred talents. Therefore, if we say that something is capable of existing and of not existing, we are bound to add the length of time in each case. If the time in question is unlimited, we are committed to saying that something can exist for an infinite time and not exist for another infinite time, and this, says Aristotle, is impossible. He does not say definitely why it is impossible. It might be thought that he disapproved generally of attributing a temporally unlimited capacity to anything. This, however, would provide an argument which proved too much; for he is committed to an eternal world, and, in his terms, an eternal world is ‘capable of existing for an infinite time’. Indeed, he makes a special allowance for this later in the chapter (283 a 4 sqq., section (6), below). Here, presumably, his reason is that there cannot be two infinite times: the operative word is \( \dot{ \alpha } \lambda \lambda o n \) (281 b 2). His grounds for thinking that two infinites are involved are given in the following section, whose opening

words, "'Αρχή δ' ἐστω ἐντεῦθεν,' show that it is here that his real argument begins.

(2) 'Αρχὴ δ' ἐστω ἐντεῦθεν (281 b 3) . . . ἀπλῶς ἀφθαρτὸν (281 b 25). Aristotle prefaces his argument with some remarks about falsehood and impossibility. 'To say that you, who are not standing, are standing is false but not impossible.' 'To say that you are standing and sitting at the same time is not only false but also impossible.' We seem to have here the distinction which Aristotle did not explicitly teach as part of his system of modal logic, but which medieval logicians introduced with beneficial effects into that system, the distinction between propositions understood, respectively, sensu diviso and sensu composito. 'It is impossible that you, who are not standing, should be standing' is to be understood sensu diviso, and is false, for it is a contingent fact that you are not standing. The form of the statement can be given in the Polish symbolism thus: \( \neg (p \lor q) \lor p \), a formula which I shall label ʻJ'. 'It is impossible that you should be both not standing and standing at the same time' is to be understood sensu composito, and is true; its form is \( \neg (p \land q) \lor p \), which I shall label 'K'.

Aristotle proceeds (281 b 16): τοῦ μὲν οὖν καθήσασθαί καὶ ἐστάναι ἀμα ἐχει τὴν δύναμιν, . . . ἀλλ' οὖχ ἔστε ἀμα καθήσασθαι καὶ ἐστάναι, ἀλλ' εν ἀλλῳ χρόνῳ. 'A man can both sit (i.e. not stand) and stand.' This seems at first sight to be a development of the same point, that there is no more reason to assert \( \neg KMNPMP \), which I shall label ʻJ\(^{\prime}\)', than \( J \) itself. \( K \) is a thesis of modal logic; \( \neg (o \lor q \lor p) \lor q \), \( J \) and \( J' \) are not. But this is not Aristotle's point, as appears when we pay attention to ἀμα and εν ἀλλῳ χρόνῳ. He is distinguishing between 'A man cannot stand <now> and not stand <now>' and 'A man cannot stand <now> and not stand <tomorrow>' More generally, and with the aid of the symbols \( t_1 \) and \( t_2 \) to indicate time-reference, the distinction is between \( \neg KMNp_1p_2t_1 \), which is a special case of \( K \), and true, and \( \neg KMNp_1p_2t_2 \), which is a special case of \( \neg KNPp_1 \) and false (or undesignated). Now this temporal distinction has also been referred to by the sensus compositus/sensus divisus

2 As used by Prior, op. cit.
3 It is true that Aristotle's contrast is, properly speaking, between 'A man is now capable of standing and not standing' and 'A man is capable of standing now and not standing now.' To represent this accurately in symbolic form it would be necessary to attach time-references to the modus as well as to the dictum. viz. \( KMNt_1Np_1Mt_2p_2t_1 \) as opposed to \( NMT_1KNPt_1p_2t_2 \). However, the multiplication of possible combinations which this introduces is largely irrelevant. Aristotle's confusion is basically between what I have called, respectively, the modal and temporal forms of the compositus/divisus distinction. The fact that his examples are not pure cases of either distinction is merely a product of this confusion. (I am grateful to Mr McGuinness for drawing my attention to all this.)
4 As an example of a sentence to which the compositus/divisus distinction applies text-books give 'Caeci vident' (Matt. xi. 5). The use of this example goes back at least to the thirteenth century: cf. Kilwardby, Dubitationes super Mixtionibus, MS. Merton College 280, fol. 104 va, 'Ad ultimum decadendum quod haec est distinguenda contingit aliquod videns esse caecum secundum compositionem et divisionem'. I am grateful to Fr Ivo Thomas, O.P., sometime Prior of Oxford, for this reference.
terminology, and, although Aristotle does not himself employ these terms, it seems that in this very passage he is passing confusedly from one sort of *compositus/divisus* distinction to the other. He rightly points out that the latter, temporal, variety of the *compositus/divisus* distinction is not applicable when one of the time references is to an infinite period (*t*_inf*). *NMKNpt*_1 pt_*inf* is, as much as *NMKNpt* pt*inf* a, a special case of *K*, and true. There is no distinguishing of time-references if one (or both) of the time-references involved is infinite—*e*ī *d*ē *ti* ἀπειρον χρόνων ἔχει πλειόνων δύναμιν, οὐκ ἐστὶν ἐν ἄλλω χρόνῳ, ἀλλά τοῦθ', ἁμα (281 b 18–20). What Aristotle does not see is that the former, purely modal, variety of the *compositus/divisus* distinction is still available. No doubt *NMKNpt* pt*inf* is necessarily a special case of *K*, whatever value, finite or infinite, is given for *n*; but *NKpt* pt*inf* *Mpt* is equally a special case of *J*, and undesignated. The temporal variety of the *compositus/divisus* distinction, which Aristotle introduced at 281 b 16, is a red herring. The statement ‘*X* never corrupts (i.e. continues existing for an infinite time) but is corruptible’ can still be interpreted *sensu diviso* after the pattern of *Kpt* pt*inf* *Mpt* pt*inf* Aristotele has still to show that this gives rise to a contradiction.

The point I have been making was not seen by Simplicius, nor, presumably, by Alexander of Aphrodisias; for it seems that Simplicius has preserved the salient features of Alexander’s exegesis of this chapter.¹ It was seen, however, by the only two medieval commentators I have read—Aquinas and Buridan. Aquinas comments:

*Sed videtur quod iste processus Aristotelis necessitatem non habeat. Quamvis enim nullius potentia sit ad hoc quod duo opposita sint in eodem tempore in actu, tamen nihil prohibet quod potentia alicuius sit ad duo opposita respectu eiusdem temporis sub disjunctione aequaliter et eodem modo: sicut potentia mea est ad hoc quod cras in ortu solis vel sedeam vel stem; non tamen ut utrumque sit simul [my ‘*K*’], sed aequaliter possum vel stare non sedendo, vel sedere non stando [my ‘*J*’]. Sic igitur posset aliquis obviare rationi Aristotelis. Ponamus enim aliquid semper ens, ita tamen quod istud esse suum sempiternum sit contingens et non necessarium. Poterit ergo non esse respectu cuiuscumque partis temporis infiniti, in quod ponitur semper esse: nec propter hoc sequetur quod aliquid sit simul ens et non ens. Eadem enim ratio videtur in toto infinito tempore, et in aliquo toto tempore finito. Etsi enim ponamus quod aliquis sit in domo semper per totam diem, tamen non est impossibile eum in domo non esse in quacumque parte dici: quia non ex necessitate est in domo per totam diem, sed contingenter.²*

At this point, however, and to my mind unfortunately, Aquinas comes to his master’s rescue with an entirely new argument. Existing, he says, is not on a par with being indoors—‘non est eadem ratio utroque’. For ‘potentia existendi non est ad utrumque respectu temporis in quo quis potest esse; omnia enim appetunt esse, et unumquodque tantum est quantum potest

¹ Nor have modern scholars noticed the confusion. There is no indication that anything is wrong from either Stocks, the Oxford, or Guthrie, the Loeb translator, and M. Gérard Verbeke paraphrases the argument with apparent approval (*Revue Philosophique de Louvain* (May 1948), pp. 140 sq.).

² In lib. I, *De Caelo et Mundo*, lectio xxvi, n. 6.
esse'. Here we feel we have left the safe paths of logic far behind and are on metaphysical heights where few present-day philosophers feel sure of their balance. In the phrase 'ad utrumque', however, we have a technicality of medieval logic which derives from Aristotle.1 ‘Contingens ad utrumque’ is contrasted with ‘contingens naturum’, in that the latter possesses a potency which excludes its opposite. Heavy bodies, one presumes, have this sort of potency toward falling: they cannot also have a potency towards not falling. Clearly, if the potentia existendi is of this variety, all is lost: the case for the corruptibility of eternal beings has gone by default. It is not, however, my purpose in this paper to examine the metaphysical or ‘physical’ arguments which either Aristotle or Aquinas brings in support of the thesis. I am concerned only with exposing the logical errors in Aristotle’s arguments. Aristotle himself does not rise above the logical level at this point. There is nothing in this section of the chapter to suggest Aquinas’s appeal to the principle ‘omnia appetunt esse’.2

Buridan, the second of my medieval commentators, directs his criticism against the concluding sentences of this section (281 b 20—25) in which Aristotle attempts to prove that the statement ‘X which exists for ever is corruptible’ engenders a self-contradiction. Aristotle’s first move is to show that this statement is analysable into ‘X which exists for ever is capable of not existing.’ We could complete the analysis with ‘X never corrupts and is capable of corrupting’ which is of the form KNPMP, which I shall label ‘NJ’ since it is the contradictory of J (KNPMP). Aristotle now says ‘Esto, utpórxon’(KNPMP) δ δώναται, μη είναι’. That is to say, let us suppose that the capacity for not being is actualised, i.e. substitute P for MP. We now have a thing which P ‘Άμα εστι και οὐκ εστι καν’ ενέργειαν’, i.e. KNPP. Now, in supposing that P given possibility is actualised we may be supposing a falsehood, from which a falsehood would naturally follow. But, since the conclusion (KNPP) is impossible, this can only be because the supposition (NJ) is impossible. He thus concludes that everything eternal (= which never corrupts) is incorruptible (LCNPMP) is equivalent to NMPKNPP).

The nub of Aristotle’s argument is contained in the words ‘άλλα εί μη δόνατον ήρ, οὐκ άν καὶ δόνατον ήρ τό συμβαίνον’. ‘τό συμβαίνον’ is our KNPP. The subject of the first ‘δόνατον ήρ’ is ‘That which was supposed’. But what had been supposed? Was it simply the actualisation of MP? If so the argument fails, because the actualisation of MP (P) does not by itself entail KNPP. Or was it the actualisation of MP on the supposition that X never corrupts (P) (el δη ἀπειρον χρόνον ἐστι—281 b 21)? This would indeed entail the contradiction (CNPCPKNPP = CKNPPKNPP), but would not prove the impo-

1 Cf. Bocheński, op. cit., and in particular the discussions on pp. 677 and 685.
2 This point is made by Mgr Augustin Mansion in his Introduction à la Physique Aristotélicienne (Louvain, and ed. 1947): ‘Le raisonnement d’Aristote nous parait sophistique. Saint Thomas essaye de le justifier, mais la raison qu’il apporte y introduit un élément étranger, qui ne semble pas être réellement contenu dans la pensée de l’auteur’ (p. 284, n. 9).
bility of actualising \( Mp \), but only the impossibility of a conjunction of this with \( Np \). It would prove \( K \), not \( J \).

Buridan\(^1\) discusses the application of the argument to the thesis ‘Omne generabile generabitur’, but he recognises that the argument he is criticising is formally identical with that by which Aristotle claims to prove ‘Omne corruptibile corrumpetur’, etc. He first presents Aristotle’s argument thus:

Et arguitur quod sic, sicut Aristoteles saepe in isto tractatu videtur arguere. Supponimus enim quod numquam ex possibili, quantumcumque falsum, sequitur impossibile; et ideo, si conclusio aliquidus syllogismus est impossibilis, oportet alteram praemissas esse impossibiles; et nisi ista concederentur syllogismus ad impossibile nullius esset utilitatis. Tunc ergo, si aliquid non concedat quod omne generabile generabitur, ponat oppositum, scilicet quod aliquid est generabile et non generabitur; et illud vocetur A. Tunc arguam sic: A non generabitur, et ipsum A generabitur; ergo quod generatur non generatur. Ista conclusio est non solum falsa, sed impossibilis; ergo aliqua praemissorum erat impossibilis. Sed non minor, quae dicebat quod A generabitur, quia ex quo A conceditur generabile, possi be est ut generetur; ideo haec est possibilis, quod A generabitur, licet sit falsa. Ergo maior erat impossibilis, quam ponebat adversarius [sc. the adversary of the thesis ‘Omne generabile generabitur’], scilicet quod A non generabitur.

His refutation of this argument is as follows:

Ad primam dico quod ille modus arguendus non valet, quamvis Aristoteles videtur saepe uti eo in isto tractatu; nec ego scirem sustinere processum et rationes eius quantum ad hoc. Saepe enim contingit quod utraque praemissas est possibilis, et tamen conclusio est impossibilis propter incomposibilitatem praemissarum. Verbi gratia, ‘omne currens est homo,’ ‘omnis equus est currens’; sequitur in primo modo primae figureae quod ‘omnis equus est homo’; et haec est impossibilis, cum tamen utraque praemissas estess possibilis. Et tamen bene concedendum quod est, consequentia existente bona, si consequens est imposible oportet antecedens, ex quo sufficienter sequatur illud consequens, esse impossibile. Sed neutra praemissarum est tale antecedens, imo copulativa composita ex ambobus praemissis est sufficiens antecedens. Et illa copulativa est impossibilis, scilicet ista copulativa ‘omne currens est homo et omnis equus est currens,’ quamvis quaelibet categorica secundum se esset possibilis. Et ita est in proposito; haec enim est possibilis, ‘A non generabitur,’ et similiter ista, ‘A generabitur’; sed ista copulativa ex eis composita est impossibilis, ‘A generabitur et A non generabitur,’ propter incomposibilitatem earum. Et ideo non est mirum si ad eam sequitur impossibile.

In a later passage Buridan explicitly recommends this solution as applicable to Aristotle’s argument in favour of the thesis ‘Omne corruptibile corrumpetur’:

Et sicut dictum fuit prius, illa ratio qua saepe utitur etiam nihil valet—scilicet, ponamus quod adversarius dicat A esse corruptibile et habere potentiam ad non esse, et tamen semper erit; tunc igitur arguemus, ‘A aliquando non erit et ipsum A

semper erit, ergo quod semper erit aliquando non erit'. Solvatis rationem sicut in alia quaestione solvebatur prima ratio arguens quod omne generabile generabitur.¹

Buridan, therefore, detects and exposes the fallacy of the argument of 281 b 20–25. It is, however, interesting to notice one consequence which would follow if Aristotle's argument here were valid, and \( J (\text{NKNpMp}) \) were accordingly regarded as a law of modal logic. This would be equivalent to admitting \( \text{CpMp} \) as an axiom \( (\text{NKNpMp} = \text{CNpNMPp} = \text{CpNMPp} = \text{CpMp}) \), and to do this as Professor Prior remarks,⁴ is to make modal logic 'collapse' into the assertoric calculus. He elsewhere quotes Łukasiewicz as teaching that in a system which can qualify as modal logic "'If \( Mp \) then \( p \)," but not its converse, must be a logical law', and similarly "'If \( p \) then \( Mp \)," but not its converse, must be a logical law'.³ It may be argued indeed that Aristotle shows himself to be intuitively aware of this principle in his preliminary discussion of the difference between falsehood and impossibility (281 b 6–14). There is there, as we have seen, an implicit recognition of the compositus/divisus distinction in its modal form. But by confusing the modal with the temporal form of the distinction, and abandoning the former in favour of the latter, Aristotle is in danger of destroying the distinction between modal and assertoric propositions altogether (cf. Hintikka, op. cit. (a), section 15).

(3) 'Ομοιος δὲ καὶ ἀγένητον (281 b 26) ... ἀδίνατον καὶ γενητὸν εἶναι (282 a 4). Here Aristotle, having demonstrated, as he thinks, that that which exists for ever is incapable of not existing, concludes that that which always exists must be ἀγένητος as well as ἀφφαρτος. The difference between the meanings of these words, as Aristotle defines them, is merely one of tense: ἀγένητος means 'incapable of not having existed in the past'; ἀφφαρτος, 'incapable of not existing in the future'. Clearly both are implied by 'incapable of not existing (simpliciter)'. Of course, the sense which Aristotle gives to ἀγένητος is eccentric. We should normally translate it by 'ungenerated', or the like; and what is denied by the assertion that something is ungenerated is that there was a time when it actually did not exist, not that there was a time when it possibly did not exist. And in this normal sense of 'ungenerated' (and of ἀγένητος) it is tautological to predicate it of that which exists for ever. This is an ambiguity which is liable to cause confusion. Nevertheless, in this passage, Aristotle sticks to his own eccentric sense of ἀγένητος, and shows correctly enough that his previous argument implies that the ἀδίνον is ἀγένητον in this sense.

(4) 'Επει δ' ὑ ἀπόφασις (282 a 5) ... δὲ διεκτικαὶ πρότερον (282 a 25). It is difficult to know how to connect this passage with what has gone before. At 281 b 30 Aristotle adds a rider to his thesis that there is no time in which

¹ Ibid., p. 127, 17–23.
³ Time and Modality, pp. 2 sq.
that which always is is capable of not being: ‘no time, that is, either infinite or finite’. His thought seems to be that capacity for temporally unlimited existence rules out capacity for temporally unlimited non-existence; and, since the former includes capacity for temporally limited existence (as whole includes part), it rules out capacity for temporally limited non-existence too. This observation is repeated in different terms in 281 b 32 sqq.: οὐκ ἀρα ἐνδέχεται τὸ αὐτὸ καὶ έν έαί τε δύνασθαι εἶναι καὶ έαί μή εἶναι. ΄άλλα μήν οὐδέ τήν ἀπόφασιν, οἴον λέγω μή έαί εἶναι. Clearly we are already hotting up for a ‘square of opposition’.

This square of opposition is fully deployed in 282 a 5 sqq. The first thing to notice, however, is that the Greek word-order presents a certain ambiguity. Both the Oxford and the Loeb translators render τό έαί δύναμένον εἶναι as ‘that which is always capable of being’. Aquinas, on the other hand, whose commentary regularly takes the form of an extended paraphrase, reproduces the ‘semper possibile esse’ of his Latin translation by ‘huius affirmativae quae est possibile semper esse’. (Aquinas uses ‘possibilis’ as a translation of both δύνασται and δύναμενος: the Latin word, therefore, performs both active and passive functions of the two English words ‘possible’ and ‘capable’, indiscriminately.) The question is, which word does έαί qualify, δύναμένον or εἶναι? The contradictory, which Aristotle gives as τό μή έαί δύναμεν εἶναι introduces a second query. Not only do we have to decide whether έαί qualifies δύναμενον or εἶναι, but whether μή qualifies the same word as έαί or not. Statistically there are four possibilities:

(1) Μή έαί δύναμενον εἶναι (Stocks and Guthrie).
(2) Μή έαί δύναμενον εἶναι (Aquinas).
(3) Μή έαί δύναμενον εἶναι (Verbeke).
(4) Μή έαί δύναμενον εἶναι.

The fourth of these seems impossible to anyone with even a nodding acquaintance with Greek idiom. Moreover, the third, which Verbeke adopts, separates μή and έαί in a way that seems harsh: the lightweight words normally cling together. On merely idiomatic grounds (2) seems as acceptable as (1). μή and (probably) έαί belong to the class which Professor Dover has labelled ‘preferential words’; i.e. they are ‘disproportionately common at the beginning of a clause’. Accordingly they might well be advanced in front of δύναμενον although qualifying εἶναι. It seems that contextual and logical considerations alone must decide between (1) and (2), since both are grammatically possible.

According as we adopt (1) or (2) as the correct interpretation of this phrase we have the following versions of the alleged square of opposition:

1 Verbeke also takes it this way in his paraphrase, op. cit., p. 141.
The logical results are as follows: (1) provides us with genuine pairs of contradictories, $A^1$ and $O^1$, $E^1$ and $I^1$. $E^1$, however, is not the contrary of $A^1$, the correct contrary of $A^1$ being 'Always incapable of being'. (2) provides us with neither true contraries nor contradictories. $A^2$ could be given a genuine contradictory, 'Non possibile semper esse', whose correct contrary would be 'Non possibile non semper esse'. But—strike out 'possible' in each case and you have the following perfectly correct square of opposition:

$$
\begin{array}{c|c}
A^1 & E^1 \\
\hline
\text{Always capable of being.} & \text{Always capable of not being.} \\
I^1 & O^1 \\
\text{Not always capable of not being} & \text{Not always capable of being} \\
\end{array}
$$

(2)

$$
\begin{array}{c|c}
A^2 & E^2 \\
\hline
\text{Possibile semper esse} & \text{Possibile semper non esse} \\
I^2 & O^2 \\
\text{Possibile non semper} & \text{Possibile non semper esse} \\
\text{non esse} & \text{non esse} \\
\end{array}
$$

This is, in effect, what Aquinas does. He comments as follows:

Primo quidem declarat oppositionem eius quod est (= τοῦ) semper esse et semper non esse:¹ et quamvis adiungat hoc, quod est possibile, non tamen tradit oppositionem quae attenditur secundum possibile et non possibile, sed secundum semper esse et non semper esse.²

In other words, Aristotle overlooked the modal character of his phrases. Aquinas, with that pietas which leads him at once to detect the mind of his master and to cover up traces of his mistakes, has probably correctly diagnosed the trouble without calling attention to the danger involved.

Contextual considerations also support the view that μὴ and δὲ in Aristotle's formulations of the square of opposition are to be construed with ἐλάναι rather than with δύναμενον, that the phrases are to be interpreted in the second of the four possible senses listed above (p.103). At 282 a 24 we have: ἀμα γὰρ ἐστάι δύναμεν ἄν αἰτι ἔλαι καὶ δύναμεν μὴ δὲ αἰτι ἔλαι: τότο δ' ὅτι ἀδύνατον δεδεκται πρῶτερον. Here δὲ and μὴ ἄνι necessarily attach to ἔλαι.

If we are right in adopting sense 2, Aristotle is merely repeating that $A^3$ and $O^2$ (vide supra, p. 104) are contradictories; πρότερον, in that case, will refer to 282 a 5. This is, in fact, how Aquinas took it.\footnote{Ibid., lectio xxvii, n. 5: Quod autem hoc sit impossibile, ostensum est prius: quia dictum est quod semper esse et non semper esse opponuntur contradictorie. (The Leonine editors refer at ‘dictum est’ to n. 1, which contains the exegesis of 282 a 5 sqq.)} The Oxford and Loeb translators, on the other hand, take πρότερον as referring to 281 b 18 sqq. This does not seem so neat as Aquinas’s exposition. If, therefore, we agree with Aquinas’s view about the reference of πρότερον, we can regard this sentence as corroborating his interpretation of 282 a 5 sqq. according to the second of the squares of opposition given above.

Again, the discussion which succeeds to Aristotle’s first construction of his square of opposition so quickly passes to the assertoric forms τοῦ ἄει όντος καὶ τοῦ ἄει μὴ όντος, etc., that Aquinas’s view of the insignificance, in Aristotle’s mind, of δυνάμενον seems to be further justified. These assertoric forms, omitting any use of δύνασθαι, occur at 282 a 8, 10, 11 sqq., 23. The sentence beginning at 282 a 11 is particularly significant. Aristotle is claiming that the subcontraries of his square of opposition are mutually implicative. He vacillates, however, between the second and third squares, as displayed above (p. 104). ὅστε καὶ τὸ μή ἄει μὴ ὄν (I$^3$) ἔσται ποτὲ καὶ οὐκ ἔσται, καὶ τὸ μὴ ἄει δυνάμενον ἐναι (O$^2$—or O$^1$?) δηλοντι, ἀλλά ποτὲ ὄν, ὅστε καὶ μὴ ἐναι. The conclusion seems to be forced upon us, that after about 282 a 7 Aristotle simply forgot that he was dealing with modal expressions and substituted assertoric ones ad libitum. If this is so, we have further corroboration of the correctness of the second interpretation of the modal forms. The transition from $A^2$, etc. to $A^3$, etc. is much more readily understood than that from $A^1$, etc. to $A^3$, etc.—even if we do not consider that this is a case where to understand is to forgive.

Assuming, then, that Aristotle intends τὸ μὴ ἄει δυνάμενον ἐναι, etc., to be construed as equivalent to τὸ δυνάμενον μὴ ἄει ἐναι, etc., and confuses them with τὸ μὴ ἄει ὄν, etc., what becomes of his argument? For a start, the confusion with the assertoric forms leads him to construct an incorrect square of opposition. $A^2$, $E^3$, $I^3$ and $O^3$ do not in fact present either a pair of contraries or a pair of contradictories. Aristotle has mistakenly identified them with $A^3$, etc., from the very start, from 282 a 5 onwards. Moreover, the confusion is, if anything, worse in his idea of what it is that his square of opposition has proved. Accepting for the moment his belief in the mutual implication of subcontraries, we can agree that 282 a 5–14 prove that either $A^3$ or $E^3$ implies the denial of both $I^3$ and $O^3$. (The more formal proof of 282 a 14–21 simply makes the point that denial of the disjunction of contraries implies affirmation of the conjunction of subcontraries—which no one will wish to dispute.) Because of his confusion of the assertoric with the modal forms, however, Aristotle thinks he has proved that affirmation of either $A^3$ or $E^3$
implies the denial both of $I^1$ and of $O^2$; and since denial of $O^2$ ($\deltaυνάμενον \; \muη \; \dot{a}ει \; ε\nuαι$) certainly implies the denial of $\gammaενητόν$ and $\phiβαρτόν$, Aristotle regards himself as having given further proof of his contention, namely, that $\dot{a}παν \; το \; \dot{a}ει \; δν \; \upsilonπλως \; \dot{a}φβαρτόν$ (281 b 25). As we have seen, the fallacy lies in confusing $O^3$, which is the contradictory of $A^3$, with $O^2$, which is nothing of the sort.

It might be urged in Aristotle’s defence that he is not just confusing $O^2$ with $O^3$ in order to give a further proof that $\dot{a}παν \; το \; \dot{a}ει \; δν \; \upsilonπλως \; \dot{a}φβαρτόν$, but that he is assuming their equivalence in order to prove something else.

‘After all, he thinks, even if we don’t, that he has valid arguments to prove that the two are extensionally equivalent’. Should we then understand 282 a 5 sqq. as already part of the argument for the mutual implication of $\gammaενητός$ and $\phiβαρτός$? Simplicius tells us that this was Alexander’s view, but he himself argues against it (p. 330, 21 sqq.; cf. my remarks above, pp. 96, sq.). Aquinas is with Simplicius on this, regarding 282 a 5–25 as a proof ‘quod nullum sempiternum est genitum vel corruptibile, neque e converso’.

Such a view accords with the belief that $πρότερον$ at 282 a 25 refers to 282 a 5. If it referred to 281 b 18, sqq., the present passage could hardly be intended as a further proof of the incorruptibility of the eternal since it would rely on the earlier proof of the same thesis: we should have to regard it as designed to prove something else. But how is it possible to regard anything that is in 282 a 5–25 as an argument for the convertibility of $\gammaενητός$ and $\phiβαρτός$?

It seems to me that Aristotle is hopelessly muddled in this passage, and that questions of correct interpretation or of what he is ‘really’ out to prove are unanswerable. It may be that he confuses $O^2$, not only with $O^3$, but also with $O^1$—that the word order of $\muη \; \dot{a}ει \; δυνάμενον \; ε\nuαι$ was ambiguous even for him. After all, $A^1$ and $O^1$ are genuine contradictories, and so are $\dot{a}ει \; δυνάμενον \; ε\nuαι$ and $\muη \; \dot{a}ει \; δυνάμενον \; ε\nuαι$ as construed by Verbeke (vide supra p. 103). The fact that none of these is equivalent to $\phiβαρτόν \; \gammaενητόν$ may easily be overlooked by someone who interprets $\muη \; \dot{a}ει \; δυνάμενον \; ε\nuαι$ sometimes in these ways and sometimes as $O^2$, which is so equivalent. Worse still, it is possible that Aristotle began to think of the subcontraries of his square of opposition as equivalent, respectively, to $\gammaενητόν$ and $\phiβαρτόν$ themselves.

The introduction of $\gammaενητόν$ and $\phiβαρτόν$ in 282 a 23 is, at least, highly suspicious. Does Aristotle identify $\gammaενητόν$ and $\phiβαρτόν$ with $\Gamma$ and $\Delta$ of his immediately preceding formal proof, and thus with $I^3$ and $O^2$—themselves confused with $I^2$ and $O^2$? This possibility will require examination at a later stage. Suffice it to say now that $\gammaενητόν$ and $\phiβαρτόν$ are related to $O^2$ ($\deltaυνάμενον \; \muη \; \dot{a}ει \; ε\nuαι$) as species to genus, according as the possibility of non-existence is located in the past or the future. They are certainly not subcontraries of any square of opposition. If we accept the doctrine of the mutual implica-

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1 I am quoting here an objection made by Mr McGuinness.

2 Lectio, xxvi, n. 3.
tion of $O^2$ and $I^2$ the relation of $\gamma \nu \eta \tau \nu$ and $\phi \beta \alpha \tau \rho \tau$ to $O^2$ is identical with their relation to $I^2$, but this in no way constitutes them as subcontraries.

This doctrine of the mutual implication of subcontraries deserves passing mention. Bocheński\(^1\) has shown that it is basic to Aristotle’s system of modal logic as presented in the *Prior Analytics*. $\epsilon \nu \delta \epsilon \chi \omega \mu \epsilon \nu \nu \nu$ there is equivalent to ‘neither impossible nor necessary’, to $KM(p)MN(p)$ rather than to the simple $M$ of contemporary symbolism. In this Aristotle is not simply making a mistake\(^2\). He is reflecting a feature of ordinary language. Normally, when we say, ‘It is possible that it will rain’ we do imply, ‘It is possible that it will not rain’, and *vice versa*. Similarly, if we say, ‘Some men are proud’ we normally imply ‘Some men are not proud’. The explanation of this usage, which is certainly untidy for the purposes of systematic logic, is to be found in the ‘pragmatic rule’ formulated by Mr Strawson thus: ‘One does not make the (logically) lesser, when one could truthfully (and with equal or greater linguistic economy) make the greater, claim.’\(^3\) Thus one does not say ‘It is possible it will rain’ when one could truthfully say ‘It will necessarily rain’, nor ‘Some men are proud’ when one could truthfully say ‘All men are proud’. Indeed, to make the lesser claim on such an occasion is, if not to deny the greater, at least to give the interlocutor ‘the right to assume’\(^4\) that the greater claim is not justified, and thus to mislead him. Similarly Aristotle considers that to say that a thing does ‘not always not exist’ is to imply that the stronger claim that it ‘always exists’ is insupportable. It therefore licenses the assumption that that which does ‘not always not exist’ does ‘not always exist’ either. Hence the general rule that subcontraries are mutually implicative; and hence the application of it in, e.g., 282 a 11 sqq. One can, of course, allow that ‘$\mu \eta \ \delta \epsilon \ \mu \gamma \ \delta \nu$’ mutually implies ‘$\mu \gamma \ \delta \epsilon \ \delta \nu$’ without conceding that ‘$\phi \beta \alpha \tau \rho \tau$’ and ‘$\gamma \nu \eta \tau \nu$’ are similarly related. Aristotle’s claim that ‘$\phi \beta \alpha \tau \rho \tau$’ and ‘$\gamma \nu \eta \tau \nu$’ are mutually implicative is what we have next to consider.

\(^3\) P. F. Strawson, *Introduction to Logical Theory*, p. 179, n. 1, where Strawson acknowledges his indebtedness for this insight to Mr H. P. Grice.

*(To be concluded)*