

# M I N D

## A QUARTERLY REVIEW

### OF

## PSYCHOLOGY AND PHILOSOPHY



### I.—ARISTOTLE AND THE SEA BATTLE

#### *De Interpretatione Chapter IX*

BY G. E. M. ANSCOMBE

- 1 For what is and for what has come about, then, it is necessary that affirmation, or negation, should be true or false; and for universals universally quantified it is always necessary that one should be true, the other false; and for singulars too, as has been said; while for universals not universally quantified it is not necessary. These have been discussed.

*For what is and for what has come about*: he has in fact not mentioned these, except to say that a verb or a tense—*sc.* other than the present, which he regards as the verb *par excellence*—must be part of any proposition.

*it is necessary*: given an *antiphrasis* about the present or past, the affirmative proposition must be true or false; and similarly for the negative. An *antiphrasis* is a pair of propositions in which the same predicate is in one affirmed, in the other denied, of the same subject. Note that Aristotle has not the idea of the negation of a proposition, with the negation sign outside the whole proposition; that was (I believe) invented by the Stoics.—What Aristotle says in this sentence is ambiguous; that this is deliberate can be seen by the contrast with the next sentence, The ambiguity is first sustained, and then resolved at the end of the chapter.

*for universals universally quantified*: he does not mean, as this place by itself would suggest, that of “All men are white” and “No men are white” one must be true and the other false. But that if you take “All men are white” and “No men are

white" and construct the antiphrasis of which each is a side, namely, "All men are white—Not all men are white" and "No men are white—Some man is white", then one side of each antiphrasis must be true, and the other side must be false.

*for singulars too, as has been said*: sc. of "Socrates is white—Socrates is not white" one side is necessarily true, the other necessarily false. (This is what a modern reader cannot take in; but see the "Elucidation".)

*for universals not universally quantified*: his example rendered literally is "man is white—man is not white". From his remarks I infer that these would be correctly rendered "men are . . .". For, he says, men are beautiful, and they are also not beautiful, for they are ugly too, and if they are ugly they are not beautiful. I believe that we (nowadays) are not interested in these unquantified propositions.

*These have been discussed*: i.e. in the immediately preceding chapters, by which my explanations can be verified.

- 2 But for what is singular and future it isn't like this. For if every affirmation and negation is true or false, then it is also necessary for everything to be the case or not be the case. So if one man says something will be, and another says not, clearly it is necessary for one of them to be speaking truly, if every affirmation and negation is true or false.
- 3 For both will not hold at once on such conditions. For if it is true to say that something is white or is not white, its being white or not white is necessary, and if it is white or not white, it is true to say or deny it. And if it is not the case, then it is false, and if it is false, it is not the case; so that it is necessary as regards either the affirmation or the negation that it is true or false.

*singular and future*: sc. There will be a relevant discussion tonight; this experiment will result in the mixture's turning green; you will be sent down before the end of term.

*it isn't like this*: namely, that these propositions (or their negations) must be true or false. Throughout this paragraph the ambiguity is carefully preserved and concealed.

*it is also necessary for everything to be the case or not be the case*: the Greek "or" is, like the English, ambiguous between being exclusive and being non-exclusive. Here it is exclusive, as will appear; hence the "or" in the conditional "if every affirmation and negation is true or false" is also exclusive, and to point this he says "every affirmation and negation", not, as in (1)

"every affirmation or negation"; that "or" was non-exclusive. *For both will not hold on such conditions*: namely, on the conditions that every affirmation is true or false. This condition is not a universal one; it does not apply to the unquantified propositions, though if the "or" is non-exclusive it does. But if the conditions hold, then just one of the two speakers must be speaking the truth.

*It is true to say or deny it*:  $\eta\nu$  is the common philosophical imperfect.

- 4 So nothing is or comes about by chance or 'whichever happens'. Nor will it be or not be, but everything of necessity and not 'whichever happens'. For either someone saying something or someone denying it will be right. For it would either be happening or not happening accordingly. For whichever happens is not more thus or not thus than it is going to be.

'*whichever happens*': the Greek phrase suggests both "as it may be" and "as it turns out". "As the case may be" would have been a good translation if it could have stood as a subject of a sentence. The 'scare-quotes' are mine; Aristotle is not overtly discussing the expression "*whichever happens*".

*is not more thus or not thus than it is going to be*: as the Greek for "or" and for "than" are the same, it is so far as I know a matter of understanding the argument whether you translate as here, or (as is more usual) e.g.: "isn't or (sc. and) isn't going to be rather thus than not thus". But this does not make good sense. Aristotle is arguing: "We say '*whichever happens*' or '*as the case may be*' about the present as well as about the future; but you don't think the present indeterminate, so why say the future is?" Or rather (as he is not talking about the expression): "Whatever happens will be just as determinately thus or not thus as it is."

- 5 Further, if something is white now, it was true earlier to say it was going to be white, so that it was always true to say of any of the things that have come about: "it is, or will be." But if it was always true to say: "it is, or will be", then: impossible for that not to be or be going to be. But if it is impossible for something not to come about, then it is unable not to come about. But if something is unable not to come about it is
- 6 necessary for it to come about. Therefore it is necessary that everything that is going to be should come about. So nothing will be '*whichever happens*' or by chance. For if by chance, then not by necessity.

*But if it is impossible for something not to come about, then it is unable not to come about :* the reader who works through to the end and understands the solution will examine the dialectic to see where it should be challenged. It will turn out that the point is here, in spite of the equivalence of the two Greek expressions. The dialectic is very powerful ; in spite of having familiarised myself with the artfulness of the chapter, I cannot read this passage without being momentarily convinced.

- Still, it is not open to us, either, to say that neither is true, as : that it neither will be nor will not be. For
- 7 firstly, the affirmation being false the negation will not be true, and this being false the affirmation won't be true. —And besides, if it is true to say that something is big and white, both must hold. And if they are going to hold tomorrow, they must hold tomorrow. And if something is neither going to be not not going to be tomorrow, 'whichever happens' won't be. Take a sea-battle, for example : it would have to be the case that a sea-battle neither came about nor didn't come about tomorrow.

*Still, it is not open to us, either, to say that neither is true :* And yet Aristotle is often supposed to have adopted this as the solution.

*For firstly :* this goes against what he has shown at the end of (3) : "if it is false, it does not hold." So much, however, is obvious, and so this is not a very strong objection if we are willing to try whether neither is true. What follows is conclusive. *And if they are going to hold tomorrow :* from here to the end of the paragraph the argument is : if it is the case that something will be, then it will be the case that it is. In more detail : you say, or deny, two things about the future. If what you say is true, then when the time comes you must be able to say those two things in the present or past tenses.

'*whichever happens*' won't be : i.e. 'whichever happens' won't happen.

- 8 These are the queer things about it. And there is more of the sort, if it is necessary that for every affirmation and negation, whether for universals universally quantified or for singulars, one of the opposites should be true and one false, that there is no 'whichever happens' about what comes about, but that everything is and comes about of necessity. So that there would be no need to deliberate or take trouble, e.g. : "if we do this,

- 9 this will happen, if not, not." For there is nothing to prevent its being said by one man and denied by another ten thousand years ahead that this will happen, so that whichever of the two was then true to say will of necessity happen. And indeed it makes no difference either if people have said the opposite things or not ; for clearly this is how things are, even if there isn't one man saying something and another denying it ; nor is it its having been asserted or denied that makes it going to be or not, nor its having been ten thousand years ahead or at any
- 10 time you like. So if in the whole of time it held that the one was the truth, then it was necessary that this came about, and for everything that has been it always held, so that it came about by necessity. For if anyone has truly said that something will be, then it can't not happen. And it was always true to say of what comes about : it will be.

*These are the queer things about it. And :* I have diverged from the usual punctuation, which leads to the rendering : "These and similar strange things result, if . . .". This seems illogical.

*e.g. :* often rendered "since" : "since if we do this, this will happen, if not, not." This does not appear to me to make good sense. The Oxford translator sits on the fence here.

*So if in the whole of time it held :* one must beware of supposing that Aristotle thinks the conclusion stated in the apodosis of this sentence follows from the condition. It only follows if the previous arguments are sound. He is going to reject the conclusion, but there is no reason to think that he rejects the condition : on the contrary. The last two sentences of the paragraph are incontestable.

- 11 Now if this is impossible ! For we see that things that are going to be take their start from deliberating and from acting, and equally that there is in general a possibility of being and not being in things that are not always actual. In them, both are open, both being and not being, and so also both becoming and not becoming.
- 12 And plenty of things are obviously like this ; for example, this coat is capable of getting cut up, and it won't get cut up but will wear out first. And equally it is capable of not getting cut up, for its getting worn out first would not have occurred if it had not been capable of not
- 13 getting cut up. So this applies too to all other processes that are spoken of in terms of this kind of possibility.

So it is clear that not everything is or comes about of necessity, but with some things 'whichever happens', and the affirmation is not true rather than the negation; and with other things one is true rather and for the most part, but still it is open for either to happen, and the other not.

*take their start*: literally: "there is a starting point of things that are going to be". The word also means "principle". A human being is a prime mover (in the engineer's sense), but one that works by deliberating. As if a calculating machine not merely worked, but was, in part, precisely *qua* calculating, a prime mover. But Aristotle's approach is not that of someone enquiring into human nature, but into causes of events and observing that among them is this one.

*acting*: he means human action, which is defined in terms of deliberation; see *Nicomachean Ethics*, VI, 1139: there he repeats the word "*ἀρχή*": "*ἡ τοιαύτη ἀρχὴ ἀνθρώπου*": the cause of this sort is man. An animal too or a plant, is a prime mover. Hence his thought is not that there are *new* starting points constantly coming into existence; that would not matter. It is first of all the nature of deliberation that makes him think that the fact of human action proves the dialectic must be wrong. I cannot pursue this here; though I should like to enter a warning against the idea (which may present itself): "the nature of deliberation presupposes freedom of the will as a condition." That is not an Aristotelian idea.

*things that are not always actual*: things that are always actual are the sun, moon, planets and stars. Aristotle thought that what these do is necessary. The general possibility that he speaks of is of course a condition required if deliberation and 'action' are to be possible. If what the typewriter is going to do is necessary, I cannot do anything else with the typewriter. Not that this is Aristotle's ground for speaking of the general possibility.

*in terms of this kind of possibility*: I take it that we have here the starting point for the development of Aristotle's notion of potentiality. The sentence confirms my view of the point where he would say the dialectic went wrong.

*with other things one is true rather and for the most part*: as we should say: more probable.

- 14 The existence of what is when it is, and the non-existence of what isn't when it isn't, ~~is~~ necessary. But still, for everything that is to be is not necessary, nor for every-

- thing that isn't not to be. For it isn't the same: for everything that is to be of necessity when it is, and: for it simply to be of necessity. And the same for what isn't. And the same reasoning applies to the antiphrasis. For it is necessary that everything should be or not, and should be going to be or not. But it is not the case, separately speaking, that either of the sides is necessary. I mean, 15 e.g. that it is necessary that there will be a sea-battle tomorrow or not, but that it is not necessary that there should be a sea-battle tomorrow, nor that it should not happen. But for it to come about or not is necessary. So that since propositions are true as the facts go, it is clear that where things are such as to allow of 'which-ever happens' and of opposites, this must hold for the antiphrasis too.

*The existence of what is when it is . . . is necessary: i.e. it cannot be otherwise.* A modern gloss, which Aristotle could not object to, and without which it is not possible for a modern person to understand his argument, is: and cannot be shown to be otherwise. It will by now have become very clear to a reader that the implications of 'necessary' in this passage are not what he is used to. But see the "Elucidation".

*simply to be of necessity:* there is a temptation to recognise what we are used to under the title "logical necessity" in this phrase. But I believe that Aristotle thought the heavenly bodies and their movements were necessary in this sense. On the other hand, he seems to have ascribed something like logical necessity to them; nor is the idea as undiscussable as it seems at first sight.

*But it is not the case, separately speaking, that either of the sides is necessary:* the ambiguity of the opening "it is necessary that an affirmation (or negation) should be true or false" is here resolved. And we learn that when Aristotle said that, he meant that if  $p$  is a statement about the present or the past, then either  $p$  is necessary or not- $p$  is necessary. But this means that in order to ascribe necessity to certain propositions (the ones, namely, that are not 'simply' necessary) we have to be informed about particular facts. So, one may ask, what has this necessity got to do with logic? —Aristotle, however, states no facts, past, present, or future. (I do in what follows; I hope this will not prove misleading: the purpose is only didactic.) His results could perhaps be summarised as follows: we use indices  $\mu$  and  $\nu$  to the propositional sign to indicate present and past time references on the one hand, and future time reference on the other. Then

or all  $p$ ,  $p$  vel not- $p$  is necessary (this covers the unquantified propositions too) and  $p_p$  is necessary vel not- $p_p$  is necessary ; but it is not the case that for all  $p$ ,  $p_p$  is necessary vel not- $p_p$  is necessary.

- 16 This is how it is for what is not always existent or not always non-existent. For such things it is necessary that a side of the antiphrasis should be true or false, but not this one or that one, but whichever happens ; and that one should be true rather than the other ; but that does not mean that it is true, or false. So it is clear that it is not necessary for every affirmation and negation that this one of the opposites should be true and that one false ; for it does not hold for what does not exist but is capable of being or not being ; but it is as we have said.

*whichever happens* : sc. : it is a matter of whichever happens.  
*that one should be true rather than the other* : cf. "rather and for the most part" above ; note that this is governed by "it is necessary" ; I infer that Aristotle thought that correct statements of probability were true propositions.

*but that does not mean* : ἡδῆ, logical, not temporal<sup>1</sup> ; ἡδῆ works rather like the German "schon" (only here of course it would be "noch nicht"). ἡδῆ in a non-temporal sense is, like οὐκ ἐτι, frequent in Greek literature. English translators of philosophical texts usually either neglect to translate it or mistranslate it. For examples, see *Theaetetus* 201e4, *Physics*, 187a36, *De Interpretatione* 16a8, *Metaphysics* 1006a16. Bonitz gives some more examples.

#### AN ELUCIDATION OF THE FOREGOING FROM A MODERN POINT OF VIEW

- A. The Vice Chancellor will either be run over next week or not. And therefore either he will be run over next week or he will not. Please understand that I was *not* repeating myself !
- B. I think I understand what you were trying to do ; but I am afraid you were repeating yourself and, what is more, you cannot fail to do so.
- A. Can't fail to do so ? Well, listen to this : The Vice Chancellor is going to be run over next week . . .

<sup>1</sup> I am indebted to Miss M. Hartley of Somerville College for pointing this out to me.

- B. Then I am going to the police as soon as I can.
- A. You will only be making a fool of yourself. It's not true.
- B. Then why did you say it ?
- A. I was merely trying to make a point : namely, that I have succeeded in saying something true about the future.
- B. What have you said about the future that is true ?
- A. I don't know : but this I do know, that I have said something true ; and I know that it was either when I told you the Vice Chancellor would be run over, or on the other hand when I said he wouldn't.
- B. I am sorry, but that is no more than to say that Either he will or he won't be run over. Have you given me any information about the future ? Don't tell me you have, with one of these two remarks, for that is to tell me nothing, just because the two remarks together cover all the possibilities. If what you tell me is an Either/Or and it embraces all possibilities, you tell me nothing.
- A. Can an Either/Or be true except by the truth of *one* of its components ? I seem to remember Quine speaking of Aristotle's "fantasy", that "It is true that either  $p$  or  $q$ " is not a sufficient condition for "Either it is true that  $p$  or it is true that  $q$ ." Now I will put it like this : Aristotle seems to think that the truth of a truth-functional expression is independent of the truth values of the component propositions.
- B. But that is a howler ! The "truth" of Either  $p$  or not  $p$  is determined, as you know very well, by its truth value's being T for all possible combinations of the truth *possibilities* of its components ; that is why its "truth" gives no information. Having set out the full truth-table and discovered that for all possibilities you get T in the final column, you need make no enquiry to affirm the truth of  $p \vee \sim p$ —any enquiry would be comic. If on the other hand you tell me  $p \vee \sim q$  ( $q$  being different from  $p$ ) you do give me some information, for certain truth-combinations are excluded. There is therefore the possibility of enquiring whether your information is correct. And that I do by discovering which of the truth-possibilities is fulfilled ; and if one of the combinations of truth-possibilities which is a truth-condition for  $p \vee \sim q$  is fulfilled, then I discover that your information is correct. But to tell me "It will rain, or it won't", is not to tell me of any truth-possibility that it is—or, if you like, will be, satisfied. Now will you actually tell me something about the future ?

- A. Very well. Either you are sitting in that chair or it will not rain tomorrow.
- B. I agree, that is true, because I am sitting in this chair. But still I have been told nothing about the future, because since I know I am sitting in this chair I know what I have been told is true whether it rains tomorrow or not—i.e. for all truth possibilities of "It will rain tomorrow." But do you mind repeating your information ?
- A. Either you are sitting in that chair or it will not rain tomorrow.
- B. (*Having stood up*). I am glad to be told it will be fine—but is it certain ? Do you get it from the meteorologists ? I have heard that they are sometimes wrong.
- A. But surely we are talking about truth, not certainty or knowledge.
- B. Yes, and I am asking whether your information—which I agree is information this time—is true.
- A. I can't tell you till some time tomorrow ; perhaps not till midnight. But whatever I tell you then will have been so now—I mean if I tell you then 'True', that means not just that it will be true then but that it was true now.
- B. But I thought it was the great point against Aristotle that 'is true' was timeless.
- A. Yes—well, what I mean is that if I tell you—as I shall be able to—'True' tomorrow—I mean *if* I am able to, of course—why, then it will have been, I mean is now correct to say it is true.
- B. I understand you. If it is going to rain tomorrow it is true that it is going to rain tomorrow. I should be enormously surprised if Aristotle were to deny this.
- A. But Aristotle says it isn't true that it is going to rain tomorrow !
- B. I did not read a single prediction in what Aristotle said. He only implied that it didn't have to be true that it will rain tomorrow, i.e. it doesn't have to rain tomorrow.
- A. What ? Even if it is going to rain tomorrow ?
- B. Oh, of course, if it is going to rain tomorrow, then it necessarily will rain tomorrow :  $(p \supset p)$  is necessary. But is it going to ?
- A. I told you, I can't say, not for certain. But *why* does that matter ?
- B. Can't you say anything for certain about tomorrow ?
- A. I am going to Blackwell's tomorrow.
- B. And that is certain ?

- A. Yes, I am absolutely determined to go. (Partly because of this argument: it is a point of honour with me to go, now.)
- B. Good. I fully believe you. At least, I believe you as fully as I can. But do I—or you—know you will go? Can nothing stop you?
- A. Of course lots of things can stop me—anything from a change of mind to death or some other catastrophe.
- B. Then you aren't necessarily going to Blackwell's?
- A. Of course not.
- B. Are you necessarily here now?
- A. I don't understand you.
- B. Could it turn out that this proposition that you, NN., are in All Souls today, May 7th 1954, is untrue? Or is this certain?
- A. No, it is quite certain—My reason for saying so is that if you cared to suggest any test, which could turn out one way or the other, I can't see any reason to trust the test if, situated as I am, I have any doubt that I am here. I don't mean I can't imagine doubting it; but I can't imagine anything that would make it doubtful.
- B. Then what is true about the present and the past is *necessarily* true?
- A. Haven't you passed from certainty to truth?
- B. Do you mean to tell me that something can be certain without being true?—And isn't what is true about the present and the past quite necessary?
- A. What does 'necessary' mean here, since it obviously doesn't mean that these are what we call necessary propositions?
- B. I mean that nothing whatever could make what is certain untrue. Not: if it is true, it is necessary, but: since it is certainly true it is necessary. Now if you can show me that anything about the future is so certain that nothing could falsify it, then (perhaps) I shall agree that it is necessarily true that that thing will happen.
- A. Well: the sun will rise tomorrow.
- B. That is so certain that nothing could falsify it?
- A. Yes.
- B. Not even: the sun's not rising tomorrow?
- A. But this is absurd! When I say it is certain I am here, am I saying it wouldn't falsify it for me not to be here? But I am here, and the sun will rise tomorrow.
- B. Well, let me try again: Could anything that can happen make it untrue that you are here? If not, I go on to ask:

Could anything that can happen make it untrue that the sun rises tomorrow ?

- A. No.
- B. If we continued in darkness, the appearance of the night being continued for the rest of our lives, all the same the sun will have risen ; and so on ?
- A. But that can't happen.
- B. Is that as certain as that you are here now ?
- A. I won't say. —But what does Aristotle mean when he says that one part of the antiphrasis is necessarily true (or false) when it is the present or the past that was in question ? Right at the beginning, when I said " The Vice Chancellor will either be run over or not therefore either he will be run over or he will not " you said that I was repeating myself and could not fail to be repeating myself. And then you referred to the Truth-table-tautological account of that proposition. But does not precisely the same point apply to what Aristotle says about " Either  $p$  or not  $p$  " when  $p$  is a proposition about the present or the past ?
- B. You could have avoided repeating yourself if you had said " The Vice Chancellor will either be run over or not, therefore either it is necessary that he should be run over or it is necessary that he should not be run over ". But as you would have been disinclined to say that—seeing no possible meaning for an ascription of necessity except what we are used to call 'logical necessity'—you could not avoid repeating yourself.

Thus Aristotle's point (as we should put it) is that ' Either  $p$  or not  $p$  ' is always necessary, and this necessity is what we are familiar with. But—and this is from our point of view the right way to put it, for this is a novelty to us—that when  $p$  describes a present or past situation, then either  $p$  is necessarily true, or  $\sim p$  is necessarily true ; and here 'necessarily true' has a sense which is unfamiliar to us. In this sense I say it is necessarily true that there was not—or necessarily false that there was—a big civil war raging in England from 1850 to 1870 ; necessarily true that there is a University in Oxford ; and so on. But 'necessarily true' is not simply the same as 'true' ; for while it may be true that there will be rain tomorrow, it is not necessarily true. As everyone would say : there may be or may not. We also say this about things which we don't know about the past and the present. The question presents itself to us then in this form : does " may " express mere ignorance on our part in both cases ?

Suppose I say to someone : " In ten years' time you will have a son ; and when he is ten years old he will be killed by a tyrant." Clearly this is something that may be true and may not. But equally clearly there is no way of finding out (unless indeed you say that waiting and seeing is finding out ; but it is not finding out that it will happen, only that it does happen.)

Now if I really said this to someone, she would either be awestruck or think me dotty ; and she would be quite right. For such a prediction is a prophecy. Now suppose that what I say comes true. The whole set of circumstances—the prophecy together with its fulfilment—is a miracle ; and one's theoretical attitude (if one has one at all) to the supposition of such an occurrence ought to be exactly the same as one's theoretical attitude to the supposition that one knew of someone's rising from the dead and so on.

As Newman remarks, a miracle ought not to be a silly trivial kind of thing—e.g. if my spoon gets up one day and dances a jig on my plate, divides into several pieces and then joins up again, it qualifies ill as a miracle, though it qualifies perfectly well for philosophical discussion of physically impossible but imaginable occurrences. Similarly if one were discussing impossible predictions one would take such an example as the following : Every day I receive a letter from someone giving an accurate account of my actions and experiences from the time of posting to the time I received the letter. And whatever I do (I do random, absurd actions for example, to see if he will still have written a true account) the letter records it. Now, since we are dealing in what can be imagined and therefore can be supposed to happen, we must settle whether this would be knowledge of the future and whether its certainty would be a proof that what I did I did necessarily.

It is interesting to note that Wittgenstein agrees with Aristotle about this problem, in the *Tractatus*. " The freedom of the will consists in the fact that future actions cannot be known. The connexion of knowing and the known is that of logical necessity. ' A knows that p ' is senseless, if p is a tautology." We are therefore presented with the logical necessariness of what is known's being true, together with the logical non-necessity of the kind of things that are known. The " logical necessity " of which he speaks in the remark on knowledge is thus not just truth-table necessariness. It is the unfamiliar necessariness of which Aristotle also speaks. " A knows that p " makes sense for any p that describes a fact about the past or present ; so it comes out in Wittgenstein, and in Aristotle : past

and present facts are necessary. (In more detail, by the *Tractatus* account: if A knows p, for some q ( $q \supset p$ ) is a tautology, and q expresses a fact that A is 'acquainted' with.)

Then this letter about my actions would not have been knowledge even if what it said was always right. However often and invariably it was verified, it would still not be certain, because the facts could go against it.

But could the facts go against the sun's predicted rising? Is there not a radical disagreement between Wittgenstein and Aristotle here: Aristotle thinks that it is necessary that the sun will rise, Wittgenstein says that we do not know that the sun will rise; and that the events of the future cannot be inferred logically from those of the present. But he also says that we could not say of a world not going according to law how it would look. So though he thinks that anything describable can happen, he would enquire whether the sun's not rising tomorrow is a describable event. So why does he say we do not know that the sun will rise? Not, I think, because the facts may falsify the prediction, but because there may not be any more facts: as in death the world does not change, but stops.

### HISTORICAL TAILPIECE

The *De Interpretatione* was much read in the Middle Ages. In 1474 the following propositions on the truth of future contingents, put forward by Peter de Rivo, a university lecturer at Louvain, were condemned in a bull of Sixtus IV.

(1) In Luke, 1, when Elizabeth speaks to the Blessed Virgin Mary saying: *Blessed are you who have believed, because the things that have been said to you by the Lord will be effected in you*, she seems to suggest that those propositions, namely: "You will bear a son and call him Jesus; he will be great" etc., did not yet have truth.

(2) Christ, in saying after his resurrection: *It is necessary that all the things that are written about me in the Law of Moses and the Prophets and the Psalms should be fulfilled*, seems to have suggested that such propositions were devoid of truth.

(3) When the Apostle says in Hebrews 10: *The law having the shadow of good things to come, not the very image of the things themselves*, he seems to suggest that such propositions of the Old Law as were about the future did not yet have determinate truth.

(4) It is not enough for the truth of a proposition about the future that the thing will happen, but it is required that it should be inevitably going to happen.

(5) One of two things has to be said : either that there is not present any actual truth in the articles of faith about the future, or that the things they mean could not be prevented by the power of God.

These were condemned as 'scandalous and devious from the path of Catholic truth' and the said Peter withdrew them.

Thus the misunderstanding dates back at least to the fifteenth century.

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