

A18
I-A\9\1

Index of Aristotelian terms

[The items in Roman type constitute the transcript of these notes of Lonergan's. The items in italics are the texts referred to in these notes, quoted from the Ross translation of Aristotle's *Metaphysics*. The texts at times contain more than the single item listed in Lonergan's notes, so as to provide something of the context of the quotation.]

Necessity -- Index to Arist *Metaphys* Trans -- Ross

definition

â4 6b32 (incidental, princip contradict)

î2 26b28 (nec, in maiori, in minore)

K8 64b33 (science of accidental)

D5

L7 72b11

â4 6b32 (=1006b32): 'for this is what "being necessary" means--that it is impossible for the thing not to be. It is, then, impossible that it should be at the same time true to say the same thing is a man and is not a man.'

î2 26b28 (=1026b28): 'Since, among things which are, some are always in the same state and are of necessity (not necessity in the sense of compulsion but that which we assert of things because they cannot be otherwise), and some are not of necessity nor always, but for the most part, this is the principle and this the cause of the existence of the accidental;'

K8 64b33 (=1064b33): 'That a science of the accidental is not even possible will be evident if we try to see what the accidental really is. We say that everything either is always and of necessity (necessity not in the sense of violence, but that which we appeal to in demonstrations), or is for the most part, or is neither for the most part, nor always and of necessity, but merely as it chances . . . '

D5: 'We call "necessary" (1) (a) that without which, as a condition, a thing cannot live; e.g. breathing and food are necessary for an animal; for it is incapable of existing without these; (b) the conditions without which good cannot be or come to be, or without which we cannot get rid or be freed of evil; e.g. drinking the medicine is necessary in order that we may be cured of disease, and a man's sailing to Aegina is necessary in order that he may get his money.-- (2) The compulsory and compulsion, i.e. that which impedes and tends to hinder, contrary to impulse and purpose. For the compulsory is called necessary (whence the necessary is painful, as Evenus says: "For every necessary thing is ever irksome"), and compulsion is a form of necessity, as Sophocles says: "But force necessitates me to this act." And necessity is held to be something that cannot be persuaded--and rightly, for it is contrary to the movement which accords with purpose and with reasoning.-- (3) We say that that which cannot be otherwise is necessarily as it is. And from this sense

of "necessary" all the others are somehow derived; for a thing is said to do or suffer what is necessary in the sense of compulsory, only when it cannot act according to its impulse because of the compelling force-- which implies that necessity is that because of which a thing cannot be otherwise; and similarly as regards the conditions of life and of good; for when in the one case good, in the other life and being, are not possible without certain conditions, these are necessary, and this kind of cause is a sort of necessity. Again, demonstration is a necessary thing because the conclusion cannot be otherwise, if there has been demonstration in the unqualified sense; and the causes of this necessity are the first premisses, i.e. the fact that the propositions from which the syllogism proceeds cannot be otherwise.

Now some things owe their necessity to something other than themselves; others do not, but are themselves the source of necessity in other things. Therefore the necessary in the primary and strict sense is the simple; for this does not admit of more states than one, so that it cannot even be in one state and also in another; for if it did it would already be in more than one. If, then, there are any things that are eternal and unmovable, nothing compulsory or against their nature attaches to them.'

L7 72b11: 'The first mover, then, exists of necessity; and in so far as it exists by necessity, its mode of being is good, and it is in this sense a first principle.'

usual, accidental
D30 25a15, 18, 20 [+ accident]
i2 26b28 (vid sup)
i3 27b8
K8 64b33-65a3

D30 25a15, 18, 20: '"Accident" means (1) that which attaches to something and can be truly asserted, but neither of necessity nor usually, e.g. if some one in digging a hole for a plant has found treasure. This--the finding of treasure--is for the man who dug the hole an accident; for neither does the one come of necessity from the other or after the other, nor, if a man plants, does he usually find treasure. And a musical man might be pale; but since this does not happen of necessity nor usually, we call it an accident.'

i2 26b28 (=1026b28): 'Since, among things which are, some are always in the same state and are of necessity (not necessity in the sense of compulsion but that which we assert of things because they cannot be otherwise), and some are not of necessity nor always, but for the most part, this is the principle and this the cause of the existence of the accidental;'

i3 27b8: 'Everything, therefore, that will be, will be of necessity; e.g. it is necessary that he who lives shall one day die; for already some condition has come into existence, e.g. the presence of contraries in the same body. But whether he is to die by disease or by violence is not yet determined, but depends on the happening of something else.'

K8 64b33-65a3: 'That a science of the accidental is not even possible will be evident if we try to see what the accidental really is. We say that everything either is always and of necessity (necessity not in the sense of violence, but that which we appeal to in demonstrations), or is for the most part, or is neither for the most part, nor always and of necessity, but merely as it chances; e.g. there might be cold in the dog-days, but this occurs neither always and of necessity, nor for the most part, though it might happen sometimes. The accidental, then, is what occurs, but not always nor of necessity, nor for the most part. Now we have said what the accidental is, and it is obvious why there is no science of such a thing; for all science is of that which is always or for the most part, but the accidental is in neither of these classes.'

demonstration

Z15 39b31 no science of material particulars

L7 72b11 first mover ens necessarium

Z15 39b31: 'As has been said, then, the impossibility of defining individuals escapes notice in the case of eternal things, especially those which are unique, like the sun or the moon. For people err not only by adding attributes whose removal the sun would survive, e.g. "going round the earth" or "night-hidden" (for from their view it follows that if it stands still or is visible, it will no longer be the sun; but it is strange if this is so; for "the sun" means a certain substance); but also by the mention of attributes which can belong to another subject; e.g. if another thing with the stated attributes comes into existence, clearly it will be a sun; the formula therefore is general. But the sun was supposed to be an individual, like Cleon or Socrates. After all, why does not one of the supporters of the Ideas produce a definition of an Idea? It would become clear, if they tried, that what has now been said is true.'

L7 72b11: 'The first mover, then, exists of necessity; and in so far as it exists by necessity, its mode of being is good, and it is in this sense a first principle.'

D12

Theta 1-9

D12: "'Potency" means (1) a source of movement or change, which is in another thing than the thing moved or in the same thing qua other; e.g. the art of building is a potency which is not in the thing built, while the art of healing, which is a potency, may be in the man healed, but not in him qua healed. "Potency" then means the source, in general, of change or movement in another thing or in the same thing qua other, and also (2) the source of a thing's being moved by another thing or by itself qua other. For in virtue of that principle, in virtue of which a patient suffers anything, we call it "capable" of suffering; and this we do sometimes if it suffers anything at all, sometimes not in respect of everything it suffers, but only if it suffers a change for the better.-- (3) The capacity of performing this well or according to intention; for sometimes we say of those who merely can walk or speak but not well or not as they intend, that they cannot speak or walk. So too (4) in the case of passivity.--(5) The states in virtue of which things are absolutely impassive or unchangeable, or not easily changed for the worse, are called potencies; for things are broken and crushed and bent and in general destroyed not by having a potency but by not having one and by lacking something, and things are impassive with respect to such processes if they are scarcely and slightly affected by them, because of a "potency" and because they "can" do something and are in some positive state.

'"Potency" having this variety of meanings, so too the "potent" or "capable" in one sense will mean that which can begin a movement (or a change in general, for even that which can bring things to rest is a "potent" thing) in another thing or in itself qua other; and in one sense that which has a potency of changing into something, whether for the worse or for the better (for even that which perishes is thought to be "capable" of perishing, for it would not have perished if it had not been capable of it; but, as a matter of fact, it has a certain disposition and cause and principle which fits it to suffer this; sometimes it is thought to be of this sort because it has something, sometimes because it is deprived of something; but if privation is in a sense "having" or "habit", everything will be capable by having something, so that things are capable both by having a positive habit and principle, and by having the privation of this, if it is possible to have a privation; and if privation is not in a sense "habit", "capable" is used in two distinct senses); and a thing is capable in another sense because neither any other thing, nor itself qua other, has a potency or principle which can destroy it. Again, all of these are capable either merely because the thing might chance to happen or not to happen, or because it might do so well. This sort of potency is found even in lifeless things, e.g. in instruments; for we say one lyre can speak, and another cannot speak at all, if it has not a good tone.

'Incapacity is privation of capacity--i.e. of such a principle as has been described--either in general or in the case of something that would naturally have the capacity, or even at the time when it would naturally already have it; for the senses in which we should call a boy and a man and a eunuch "incapable of begetting" are distinct.--Again, to

either kind of capacity there is an opposite incapacity--both to that which only can produce movement and to that which can produce it well.

'Some things, then, are called adunata in virtue of this kind of incapacity, while others are so in another sense; i.e. both dunaton and adunaton are used as follows. The impossible is that of which the contrary is of necessity true, e.g. that the diagonal of a square is commensurate with the side is impossible, because such a statement is a falsity of which the contrary is not only true but also necessary; that it is commensurate, then, is not only false but also of necessity false. The contrary of this, the possible, is found when it is not necessary that the contrary is false, e.g. that a man should be seated is possible; for that he is not seated is not of necessity false. The possible, then, in one sense, as has been said, means that which is not of necessity false; in one, that which is true; in one, that which may be true.--A "potency" or "power" in geometry is so called by a change of meaning.--These senses of "capable" or "possible" involve no reference to potency. But the senses which involve a reference to potency all refer to the primary kind of potency; and this is a source of change in another thing or in the same thing qua other. For other things are called "capable", some because something else has such a potency over them, some because it has not, some because it has it in a particular way. The same is true of the things that are incapable. Therefore the proper definition of the primary kind of potency will be "a source of change in another thing or in the same thing qua other".'

Theta 1-9: '1 We have treated of that which is primarily and to which all the other categories of being are referred--i.e. of substance. For it is in virtue of the concept of substance that the others also are said to be--quantity and quality and the like; for all will be found to involve the concept of substance, as we said in the first part of our work. And since "being" is in one way divided into individual thing, quality, and quantity, and is in another way distinguished in respect of potency and complete reality, and of function, let us now add a discussion of potency and complete reality. And first let us explain potency in the strictest sense, which is, however, not the most useful for our present purpose. For potency and actuality extend beyond the cases that involve a reference to motion. But when we have spoken of this first kind, we shall in our discussions of actuality explain the other kinds of potency as well.

'We have pointed out elsewhere that "potency" and the word "can" have several senses. Of these we may neglect all the potencies that are so called by an equivocation. For some are called so by analogy, as in geometry we say one thing is or is not a "power" of another by virtue of the presence or absence of some relation between them. But all potencies that conform to the same type are originative sources of some kind, and are called potencies in reference to one primary kind of potency, which is an originative source of change in another thing or in the thing itself qua other. For one kind is a potency of being acted on, i.e. the originative source, in the very thing acted on, of its being passively changed by another thing or by itself qua other; and another kind is a state of insusceptibility to change for the worse and to destruction by another thing or by the thing itself qua other by virtue of an originative source of change. In all these definitions is implied the formula of potency in the primary sense.--And again these so-called

potencies are potencies either of merely acting or being acted on, or of acting or being acted on well, so that even in the formulae of the latter the formulae of the prior kinds of potency are somehow implied.

'Obviously, then, in a sense the potency of acting and of being acted on is one (for a thing may be "capable" either because it can itself be acted on or because something else can be acted on by it), but in a sense the potencies are different. For the one is in the thing acted on; it is because it contains a certain originative source, and because even the matter is an originative source, that the thing acted on is acted on, and one thing by one, another by another; for that which is oily can be burnt, and that which yields in a particular way can be crushed; and similarly in all other cases. But the other potency is in the agent, e.g. heat and the art of building are present, one in that which can produce heat and the other in the man who can build. And so, in so far as a thing is an organic unity, it cannot be acted on by itself; for it is one and not two different things. And "impotence" and "impotent" stand for the privation which is contrary to potency of this sort, so that every potency belongs to the same subject and refers to the same process as a corresponding impotence. Privation has several senses; for it means (1) that which has not a certain quality and (2) that which might naturally have it but has not it, either (a) in general or (b) when it might naturally have it, and either (à) in some particular way, e.g. when it has not it completely, or (á) when it has not it at all. And in certain cases if things which naturally have a quality lose it by violence, we say they have suffered privation.

'2 Since some such originative sources are present in soulless things, and others in things possessed of soul, and in soul, and in the rational part of the soul, clearly some potencies will be non-rational and some will be accompanied by a rational formula. This is why all arts, i.e. all productive forms of knowledge, are potencies; they are originative sources of change in another thing or in the artist himself considered as other.

'And each of those which are accompanied by a rational formula is alike capable of contrary effects, but one non-rational power produces one effect; e.g. the hot is capable only of heating, but the medical art can produce both disease and health. The reason is that science is a rational formula, and the same rational formula explains a thing and its privation, only not in the same way; and in a sense it applies to both, but in a sense it applies rather to the positive fact. Therefore such sciences must deal with contraries, but with one in virtue of their own nature and with the other not in virtue of their nature; for the rational formula applies to one object in virtue of that object's nature, and to the other, in a sense, accidentally. For it is by denial and removal that it exhibits the contrary; for the contrary is the primary privation, and this is the removal of the positive term. Now since contraries do not occur in the same thing, but science is a potency which depends on the possession of a rational formula, and the soul possesses an originative source of movement; therefore, while the wholesome produces only health and the calorific only heat and the frigorific only cold, the scientific man produces both the contrary effects. For the rational formula is one which applies to both, though not in the same way, and it is in a soul which possesses an originative source of movement; so that the soul will start both processes from the same originative source,

having linked them up with the same thing. And so the things whose potency is according to a rational formula act contrariwise to the things whose potency is non-rational; for the products of the former are included under one originative source, the rational formula.

'It is obvious also that the potency of merely doing a thing or having it done to one is implied in that of doing it or having it done well, but the latter is not always implied in the former: for he who does a thing well must also do it, but he who does it merely need not also do it well.'

'3 There are some who say, as the Megaric school does, that a thing "can" act only when it is acting, and when it is not acting it "cannot" act, e.g. that he who is not building cannot build, but only he who is building, when he is building; and so in all other cases. It is not hard to see the absurdities that attend this view.

'For it is clear that on this view a man will not be a builder unless he is building (for to be a builder is to be able to build), and so with the other arts. If, then, it is impossible to have such arts if one has not at some time learnt and acquired them, and it is then impossible not to have them if one has not sometime lost them (either by forgetfulness or by some accident or by time; for it cannot be by the destruction of the object, for that lasts for ever), a man will not have the art when he has ceased to use it, and yet he may immediately build again; how then will he have got the art? And similarly with regard to lifeless things; nothing will be either cold or hot or sweet or perceptible at all if people are not perceiving it; so that the upholders of this view will have to maintain the doctrine of Protagoras. But, indeed, nothing will even have perception if it is not perceiving, i.e. exercising its perception. If, then, that is blind which has not sight though it would naturally have it, when it would naturally have it and when it still exists, the same people will be blind many times in the day--and deaf too.

'Again, if that which is deprived of potency is incapable, that which is not happening will be incapable of happening; but he who says of that which is incapable of happening either that it is or that it will be will say what is untrue; for this is what incapacity meant. Therefore these views do away with both movement and becoming. For that which stands will always stand, and that which sits will always sit, since if it is sitting it will not get up; for that which, as we are told, cannot get up will be incapable of getting up. But we cannot say this, so that evidently potency and actuality are different (but these views make potency and actuality the same, and so it is no small thing they are seeking to annihilate), so that it is possible that a thing may be capable of being and not be, and capable of not being and yet be, and similarly with the other kinds of predicate; it may be capable of walking and yet not walk, or capable of not walking and yet walk. And a thing is capable of doing something if there will be nothing impossible in its having the actuality of that of which it is said to have the capacity. I mean, for instance, if a thing is capable of sitting and it is open to it to sit, there will be nothing impossible in its actually sitting; and similarly if it is capable of being moved or moving, or of standing or making to stand, or of being or coming to be, or of not being or not coming to be.

'The word "actuality", which we connect with "complete reality", has, in the main, been extended from movements to other things; for actuality in the strict sense is thought to be identical with movement. And so people do not assign movement to non-existent things, though they do assign some other predicates. E.g. they say that non-existent things are objects of thought and desire, but not that they are moved; and this because, while ex hypothesi they do not actually exist, they would have to exist actually if they were moved. For of non-existent things some exist potentially; but they do not exist, because they do not exist in complete reality.

'4 If what we have described is identical with the capable or convertible with it, evidently it cannot be true to say "this is capable of being but will not be", which would imply that the things incapable of being would on this showing vanish. Suppose, for instance, that a man--one who did not take account of that which is incapable of being--were to say that the diagonal of the square is capable of being measured but will not be measured, because a thing may well be capable of being or coming to be, and yet not be or be about to be. But from the premises this necessarily follows, that if we actually supposed that which is not, but is capable of being, to be or to have come to be, there will be nothing impossible in this; but the result will be impossible, for the measuring of the diagonal is impossible. For the false and the impossible are not the same; that you are standing now is false, but that you should be standing is not impossible.

'At the same time it is clear that if, when A is real, B must be real, then, when A is possible, B also must be possible. For if B need not be possible, there is nothing to prevent its not being possible. Now let A be supposed possible. Then, when A was possible, we agreed that nothing impossible followed if A were supposed to be real; and then B must of course be real. But we supposed B to be impossible. Let it be impossible, then. If, then, B is impossible, A also must be so. But the first was supposed impossible; therefore the second also is impossible. If, then, A is possible, B also will be possible, if they were so related that if A is real, B must be real. If, then, A and B being thus related, B is not possible on this condition, A and B will not be related as was supposed. And if when A is possible, B must be possible, then if A is real, B also must be real. For to say that B must be possible, if A is possible, means this, that if A is real both at the time when and in the way in which it was supposed capable of being real, B also must then and in that way be real.

'5 As all potencies are either innate, like the senses, or come by practice, like the power of playing the flute, or by learning, like artistic power, those which come by practice or by rational formula we must acquire by previous exercise but this is not necessary with those which are not of this nature and which imply passivity.

'Since that which is "capable" is capable of something and at some time and in some way (with all the other qualifications which must be present in the definition), and since some things can produce change according to a rational formula and their potencies involve such a formula, while other things are non-rational and their potencies are non-rational, and the former potencies must be in a living thing, while the latter can be both in the living and in the lifeless; as regards

potencies of the latter kind, when the agent and patient meet in the way appropriate to the potency in question, the one must act and the other be acted on, but with the former kind of potency this is not necessary. For the non-rational potencies are all productive of one effect each, but the rational produce contrary effects, so that if they produced their effects necessarily they would produce contrary effects at the same time; but this is impossible. There must, then, be something else that decides; I mean by this, desire or will. For whichever of two things the animal desires decisively, it will do, when it is present, and meets the passive object, in the way appropriate to the potency in question. Therefore everything which has a rational potency, when it desires that for which it has a potency and in the circumstances in which it has the potency, must do this. And it has the potency in question when the passive object is present and is in a certain state; if not it will not be able to act. (To add the qualification "if nothing external prevents it" is not further necessary; for it has the potency on the terms on which this is a potency of acting, and it is this not in all circumstances but on certain conditions, among which will be the exclusion of external hindrances; for these are barred by some of the positive qualifications.) And so even if one has a rational wish, or an appetite, to do two things or contrary things at the same time, one will not do them; for it is not on these terms that one has the potency for them, nor is it a potency of doing both at the same time, since one will do the things which it is a potency of doing, on the terms on which one has the potency.

'6 Since we have treated of the kind of potency which is related by movement, let us discuss actuality--what, and what kind of thing, actuality is. For in the course of our analysis it will also become clear, with regard to the potential, that we not only ascribe potency to that whose nature it is to move something else, or to be moved by something else, either without qualification or in some particular way, but also use the word in another sense, which is the reason of the inquiry in the course of which we have discussed these previous senses also. Actuality, then, is the existence of a thing not in the way which we express by "potentially"; we say that potentially, for instance, a statue of Hermes is in the block of wood and the half-line is in the whole, because it might be separated out, and we call even the man who is not studying a man of science, if he is capable of studying; the thing that stands in contrast to each of these exists actually. Our meaning can be seen in the particular cases by induction, and we must not seek a definition of everything but be content to grasp the analogy, that it is as that which is building is to that which is capable of building, and the waking to the sleeping, and that which is seeing to that which has its eyes shut but has sight, and that which has been shaped out of the matter to the matter, and that which has been wrought up to the unwrought. Let actuality be defined by one member of this antithesis, and the potential by the other. But all things are not said in the same sense to exist actually, but only by analogy--as A is in B or to B, C is in D or to D; for some are as movement to potency, and the others as substance to some sort of matter.

'But also the infinite and the void and all similar things are said to exist potentially and actually in a different sense from that which applies to many other things, e.g. to that which sees or walks or is

seen. For of the latter class these predicates can at some time be also truly asserted without qualification; for the seen is so called sometimes because it is being seen, sometimes because it is capable of being seen. But the infinite does not exist potentially in the sense that it will ever actually have separate existence; it exists potentially only for knowledge. For the fact that the process of dividing never comes to an end ensures that this activity exists potentially, but not that the infinite exists separately.

'Since of the actions which have a limit none is an end but all are relative to the end, e.g. the removing of fat, or fat-removal, and the bodily parts themselves when one is making them thin are in movement in this way (i.e. without being already that at which the movement aims), this is not an action or at least not a complete one (for it is not an end); but that movement in which the end is present is an action. E.g. at the same time we are seeing and have seen, are understanding and have understood, are thinking and have thought (while it is not true that at the same time we are learning and have learnt, or are being cured and have been cured). At the same time we are living well and have lived well, and are happy and have been happy. If not, the process would have had sometime to cease, as the process of making thin ceases: but, as things are, it does not cease; we are living and have lived. Of these processes, then, we must call the one set movements, and the other actualities. For every movement is incomplete--making thin, learning, walking, building; these are movements, and incomplete at that. For it is not true that at the same time a thing is walking and has walked, or is building and has built, or is coming to be and has come to be, or is being moved and has been moved, but what is being moved is different from what has been moved, and what is moving from what has moved. But it is the same thing that at the same time has seen and is seeing, or is thinking and has thought. The latter sort of process, then, I call an actuality, and the former a movement.

7 'What, and what kind of thing, the actual is, may be taken as explained by these and similar considerations. But we must distinguish when a thing exists potentially and when it does not; for it is not at any and every time. E.g. is earth potentially a man? No--but rather when it has already become seed, and perhaps not even then. It is just as it is with being healed; not everything can be healed by the medical art or by luck, but there is a certain kind of thing which is capable of it, and only this is potentially healthy. And (1) the delimiting mark of that which as a result of thought comes to exist in complete reality from having existed potentially is that if the agent has willed it it comes to pass if nothing external hinders, while the condition on the other side--viz. in that which is healed--is that nothing in it hinders the result. It is on similar terms that we have what is potentially a house; if nothing in the thing acted on--i.e. in the matter--prevents it from becoming a house, and if there is nothing which must be added or taken away or changed, this is potentially a house, and the same is true of all other things the source of whose becoming is external. And (2) in the cases in which the source of the becoming is in the very thing which comes to be, a thing is potentially all those things which it will be of itself if nothing external hinders it. E.g. the seed is not yet potentially a man; for it must be deposited in something other than

itself and undergo a change. But when through its own motive principle it has already got such and such attributes, in this state it is already potentially a man; while in the former state it needs another motive principle, just as earth is not yet potentially a statue (for it must first change in order to become brass).

'It seems that when we call a thing not something else but "thaten"--e.g. a casket is not "wood" but "wooden", and wood is not "earth" but "earthen", and again earth will illustrate our point if it is similarly not something else but "thaten"--that other thing is always potentially (in the full sense of that word the thing which comes after it in this series. E.g. a casket is not "earthen" nor "earth", but "wooden"; for this is potentially a casket and this is the matter of a casket, wood in general or a casket in general, and this particular wood of this particular casket. And if there is a first thing, which is no longer, in reference to something else, called "thaten", this is prime matter; e.g. if earth is "airy" and air is not "fire" but "fiery", fire is prime matter, which is not a "this". For the subject or substratum is differentiated by being a "this" or not being one; i.e. the substratum of modifications is, e.g., a man, i.e. a body and a soul, while the modification is "musical" or "pale". (The subject is called, when music comes to be present in it, not "music" but "musical", and the man is not "paleness" but "pale", and not "ambulation" or "movement" but "walking" or "moving"--which is akin to the "thaten".) Wherever this is so, then, the ultimate subject is a substance; but when this is not so but the predicate is a form and a 'this', the ultimate subject is matter and material substance. And it is only right that "thaten" should be used with reference both to the matter and to the accidents; for both are indeterminates.

'We have stated, then, when a thing is to be said to exist potentially and when it is not.

'8 From our discussion of the various senses of "prior", it is clear that actuality is prior to potency. And I mean by potency not only that definite kind which is said to be a principle of change in another thing or in the thing itself regarded as other, but in general every principle of movement or of rest. For nature also is in the same genus as potency; for it is a principle of movement--not, however, in something else but in the thing itself qua itself. To all such potency, then, actuality is prior both in formula and in substantiality; and in time it is prior in one sense, and in another not.

'(1) Clearly it is prior in formula; for that which is in the primary sense potential is potential because it is possible for it to become active; e.g. I mean by "capable of building" that which can build, and by "capable of seeing" that which can see, and by "visible" that which can be seen. And the same account applies to all other cases, so that the formula and the knowledge of the one must precede the knowledge of the other.

'(2) In time it is prior in this sense: the actual which is identical in species though not in number with a potentially existing thing is prior to it. I mean that to this particular man who now exists actually and to the corn and to the seeing subject the matter and the seed and that which is capable of seeing, which are potentially a man and corn and seeing, but not yet actually so, are prior in time; but prior in

time to these are other actually existing things, from which they were produced. For from the potentially existing the actually existing is always produced by an actually existing thing, e.g. man from man, musician by musician; there is always a first mover, and the mover already exists actually. We have said in our account of substance that everything that is produced is something produced from something and by something, and that the same in species as it.

'This is why it is thought impossible to be a builder if one has built nothing or a harper if one has never played the harp; for he who learns to play the harp learns to play it by playing it, and all other learners do similarly. And thence arose the sophistical quibble, that one who does not possess a science will be doing that which is the object of the science; for he who is learning it does not possess it. But since, of that which is coming to be, some part must have come to be, and, of that which, in general, is changing, some part must have changed (this is shown in the treatise on movement), he who is learning must, it would seem, possess some part of the science. But here too, then, it is clear that actuality is in this sense also, viz. in order of generation and of time, prior to potency.

'But (3) it is also prior in substantiality; firstly, (a) because the things that are posterior in becoming are prior in form and in substantiality (e.g. man is prior to boy and human being to seed; for the one already has its form, and the other has not), and because everything that comes to be moves towards a principle, i.e. an end (for that for the sake of which a thing is, is its principle, and the becoming is for the sake of the end), and the actuality is the end, and it is for the sake of this that the potency is acquired. For animals do not see in order that they may have sight, but they have sight that they may see. And similarly men have the art of building that they may build, and theoretical science that they may theorize; but they do not theorize that they may have theoretical science, except those who are learning by practice; and these do not theorize except in a limited sense, or because they have no need to theorize. Further, matter exists in a potential state, just because it may come to its form; and when it exists actually, then it is in its form. And the same holds good in all cases, even those in which the end is a movement. And so, as teachers think they have achieved their end when they have exhibited the pupil at work, nature does likewise. For if this is not the case, we shall have Pauson's Hermes over again, since it will be hard to say about the knowledge, as about the figure in the picture, whether it is within or without. For the action is the end, and the actuality is the action. And so even the word "actuality" is derived from "action", and points to the complete reality.

'And while in some cases the exercise is the ultimate thing (e.g. in sight the ultimate thing is seeing, and no other product besides this results from sight), but from some things a product follows (e.g. from the art of building there results a house as well as the act of building), yet none the less the act is in the former case the end and in the latter more of an end than the potency is. For the act of building is realized in the thing that is being built, and comes to be, and is, at the same time as the house.

'Where, then, the result is something apart from the exercise, the actuality is in the thing that is being made, e.g. the act of building is in the thing that is being built and that of weaving in the thing that is

being woven, and similarly in all other cases, and in general the movement is in the thing that is being moved; but where there is no product apart from the actuality, the actuality is present in the agents, e.g. the act of seeing is in the seeing subject and that of theorizing in the theorizing subject and the life is in the soul (and therefore well-being also; for it is a certain kind of life).

'Obviously, therefore, the substance or form is actuality. According to this argument, then, it is obvious that actuality is prior in substantial being to potency; and as we have said, one actuality always precedes another in time right back to the actuality of the eternal prime mover.

'But (b) actuality is prior in a stricter sense also; for eternal things are prior in substance to perishable things, and no eternal thing exists potentially. The reason is this. Every potency is at one and the same time a potency of the opposite; for, while that which is not capable of being present in a subject cannot be present, everything that is capable of being may possibly not be actual. That, then, which is capable of being may either be or not be; the same thing, then, is capable both of being and of not being. And that which is capable of not being may possibly not be; and that which may possibly not be is perishable, either in the full sense, or in the precise sense in which it is said that it possibly may not be, i.e. in respect either of place or of quantity or quality; "in the full sense" means "in respect of substance". Nothing, then, which is in the full sense imperishable is in the full sense potentially existent (though there is nothing to prevent its being so in some respect, e.g. potentially of a certain quality or in a certain place); all imperishable things, then, exist actually. Nor can anything which is of necessity exist potentially; yet these things are primary; for if these did not exist, nothing would exist. Nor does eternal movement, if there be such, exist potentially; and, if there is an eternal mobile, it is not in motion in virtue of a potentiality, except in respect of "whence" and "whither" (there is nothing to prevent its having matter which makes it capable of movement in various directions). And so the sun and the stars and the whole heaven are ever active, and there is no fear that they may sometime stand still, as the natural philosophers fear they may. Nor do they tire in this activity; for movement is not for them, as it is for perishable things, connected with the potentiality for opposites, so that the continuity of the movement should be laborious; for it is that kind of substance which is matter and potency, not actuality, that causes this.

'Imperishable things are imitated by those that are involved in change, e.g. earth and fire. For these also are ever active; for they have their movement of themselves and in themselves. But the other potencies, according to our previous discussion, are all potencies for opposites; for that which can move another in this way can also move it not in this way, i.e. if it acts according to a rational formula; and the same non-rational potencies will produce opposite results by their presence or absence.

'If, then, there are any entities or substances such as the dialecticians say the Ideas are, there must be something much more scientific than science-itself and something more mobile than movement-itself; for these will be more of the nature of actualities, while science-itself and movement-itself are potencies for these.

'Obviously, then, actuality is prior both to potency and to every principle of change.

'9 That the actuality is also better and more valuable than the good potency is evident from the following argument. Everything of which we say that it can do something, is alike capable of contraries, e.g. that of which we say that it can be well is the same as that which can be ill, and has both potencies at once; for the same potency is a potency of health and illness, of rest and motion, of building and throwing down, of being built and being thrown down. The capacity for contraries, then, is present at the same time; but contraries cannot be present at the same time, and the actualities also cannot be present at the same time, e.g. health and illness. Therefore, while the good must be one of them, the capacity is both alike, or neither; the actuality, then is better. Also in the case of bad things the end or actuality must be worse than the potency; for that which "can" is both contraries alike. Clearly, then, the bad does not exist apart from bad things; for the bad is in its nature posterior to the potency. And therefore we may also say that in the things which are from the beginning, i.e. in eternal things, there is nothing bad, nothing defective, nothing perverted (for perversion is something bad).

'It is by an activity also that geometrical constructions are discovered; for we find them by dividing. If the figures had been already divided, the constructions would have been obvious; but as it is they are present only potentially. Why are the angles of the triangle equal to two right angles? Because the angles about one point are equal to two right angles. If, then, the line parallel to the side had been already drawn upwards, the reason would have been evident to any one as soon as he saw the figure. Why is the angle in a semicircle in all cases a right angle? If three lines are equal--the two which form the base, and the perpendicular from the centre--the conclusion is evident at a glance to one who knows the former proposition. Obviously, therefore, the potentially existing constructions are discovered by being brought to actuality; the reason is that the geometer's thinking is an actuality; so that the potency proceeds from an actuality; and therefore it is by making constructions that people come to know them (though the single actuality is later in generation than the corresponding potency).'

elements potential
2b33

2b33: '(13) Closely connected with this is the question whether the elements exist potentially or in some other manner. If in some other way, there will be something else prior to the first principles; for the potency is prior to the actual cause, and it is not necessary for everything potential to be actual.--But if the elements exist potentially, it is possible that everything that is should not be. For even that which is not yet is capable of being; for that which is not comes to be, but nothing that is incapable of being comes to be.'

potency or actuality prior
Theta 8
3a1

Theta 8 (see above)

3a1:'. . . the potency is prior to the actual cause, and it is not necessary for everything potential to be actual.'

actuality

7b28

69b15

71a6

71b23

7b28: '. . . it is that which exists potentially and not in complete reality that is indeterminate.'

69b15: 'And since that which "is" has two senses, we must say that everything changes from that which is potentially to that which is actually, e.g. from potentially white to actually white, and similarly in the case of increase and diminution.'

71a6: 'And in yet another way, analogically identical things are principles, i.e. actuality and potency; but these also are not only different for different things but also apply in different ways to them. For in some cases the same thing exists at one time actually and at another potentially. e.g. wine or flesh or man does so. (And these two fall under the above-named causes. For the form exists actually, if it can exist apart, and so does the complex of form and matter, and the privation, e.g. darkness or disease; but the matter exists potentially; for this is that which can become qualified either by the form or by the privation.) But the distinction of actuality and potentiality applies in another way to cases where the matter of cause and of effect is not the same, in some of which cases the form is not the same but different; e.g. the cause of man is (1) the elements in man (viz. fire and earth as matter, and the peculiar form), and further (2) something else outside, i.e. the father, and (3) besides these the sun and its oblique course, which are neither matter nor form nor privation of man nor of the same species with him, but moving causes.'

71b23: 'The universal causes, then, of which we spoke do not exist. For it is the individual that is the originative principle of the individuals. For while man is the originative principle of man universally, there is no universal man, but Peleus is the originative principle of Achilles, and your father of you, and this particular b of this particular ba, though b in general is the originative principle of ba taken without qualification.'

reason art nature

25b22

27a6

33b8

49b8

64a13

25b22: 'For in the case of things made the principle is in the maker--it is either reason or art or some faculty, while in the case of things done

it is in the doer--viz. will, for that which is done and that which is willed are the same.'

27a6: 'For to other things answer faculties productive of them, but to accidental results there corresponds no determinate art nor faculty; for of things which are or come to be by accident, the cause is also accidental.'

33b8: 'Obviously then the form also, or whatever we ought to call the shape present in the sensible thing, is not produced, nor is there any production of it, nor is the essence produced; for this is that which is made to be in something else either by art or by nature or by some faculty.'

49b8: 'And I mean by potency not only that definite kind which is said to be a principle of change in another thing or in the thing itself regarded as other, but in general every principle of movement or of rest.'

64a13: 'For in the case of productive science the principle of movement is in the producer and not in the product, and is either an art or some other faculty. And similarly in practical science the movement is not in the thing done, but rather in the doers.'

coni.(?) matter

42a27, b10

50a15

60a21

69b14

70b12

71a10

88b1

92a3

42a27: 'The substratum is substance, and this is in one sense the matter (and by matter I mean that which, not being a "this" actually, is potentially a "this"), and in another sense the formula or shape (that which being a "this" can be separately formulated), and thirdly the complex of these two, which alone is generated and destroyed, and is, without qualification, capable of separate existence; for of substances completely expressible in a formula some are separable and some are not.'

42b10: 'Since the substance which exists as underlying and as matter is generally recognized, and this is that which exists potentially, it remains for us to say what is the substance, in the sense of actuality . . . '

50a15: 'Further, matter exists in a potential state, just because it may come to its form; and when it exists actually, then it is in its form.'

60a21: 'But if the principle we now seek is not separable from corporeal things, what has a better claim to the name than matter? This, however, does not exist in actuality, but exists in potency. And it would seem rather that the form or shape is a more important principle than this;

but the form is perishable, so that there is no eternal substance at all which can exist apart and independent.'

69b14: 'The matter, then, which changes must be capable of both states.'

70b12: 'Or, as we are wont to put it, in a sense they have and in a sense they have not; e.g. perhaps the elements of perceptible bodies are, as form, the hot, and in another sense the cold, which is the privation; and, as matter, that which directly and of itself potentially has these attributes; and substances comprise both these and the things composed of these, of which these are the principles, or any unity which is produced out of the hot and the cold, e.g. flesh or bone; for the product must be different from the elements.'

71a10: 'For the form exists actually, if it can exist apart, and so does the complex of form and matter, and the privation, e.g. darkness or disease; but the matter exists potentially; for this is that which can become qualified either by the form or by the privation).'

88b1: 'And (c) the matter of each thing, and therefore of substance, must be that which is potentially of the nature in question; but the relative is neither potentially nor actually substance.'

92a3: 'And if, as we were saying the matter is that which is potentially each thing, e.g. that of actual fire is that which is potentially fire, the bad will be just the potentially good.'

irrational rational

Theta 2

47b31

50b33

Theta 2: 'Since some such originative sources are present in soulless things, and others in things possessed of soul, and in soul, and in the rational part of the soul, clearly some potencies will be non-rational and some will be accompanied by a rational formula. This is why all arts, i.e. all productive forms of knowledge, are potencies; they are originative sources of change in another thing or in the artist himself considered as other.

'And each of those which are accompanied by a rational formula is alike capable of contrary effects, but one non-rational power produces one effect; e.g. the hot is capable only of heating, but the medical art can produce both disease and health. The reason is that science is a rational formula, and the same rational formula explains a thing and its privation, only not in the same way; and in a sense it applies to both, but in a sense it applies rather to the positive fact. Therefore such sciences must deal with contraries, but with one in virtue of their own nature and with the other not in virtue of their nature; for the rational formula applies to one object in virtue of that object's nature, and to the other, in a sense, accidentally. For it is by denial and removal that it exhibits the contrary; for the contrary is the primary privation, and this is the removal of the positive term. Now since contraries do not occur in the same thing, but science is a potency which depends on the possession of a rational formula, and the soul possesses an originative source of movement; therefore, while the wholesome produces only health and the calorific only heat and the frigorific only cold, the

scientific man produces both the contrary effects. For the rational formula is one which applies to both, though not in the same way, and it is in a soul which possesses an originative source of movement; so that the soul will start both processes from the same originative source, having linked them up with the same thing. And so the things whose potency is according to a rational formula act contrariwise to the things whose potency is non-rational; for the products of the former are included under one originative source, the rational formula.

'It is obvious also that the potency of merely doing a thing or having it done to one is implied in that of doing it or having it done well, but the latter is not always implied in the former: for he who does a thing well must also do it, but he who does it merely need not also do it well.'

47b31: 'As all potencies are either innate, like the senses, or come by practice, like the power of playing the flute, or by learning, like artistic power, those which come by practice or by rational formula we must acquire by previous exercise but this is not necessary with those which are not of this nature and which imply passivity.'

50b33: 'But the other potencies, according to our previous discussion, are all potencies for opposites; for that which can move another in this way can also move it not in this way, i.e. if it acts according to a rational formula; and the same non-rational potencies will produce opposite results by their presence or absence.'

potential and actual are one
45b21

45b21: '. . . for each thing is a unity, and the potential and the actual are somehow one.'

infinite and void potential
48b9

48b9: 'But also the infinite and the void and all similar things are said to exist potentially and actually in a different sense from that which applies to many other things, e.g. to that which sees or walks or is seen. For of the latter class these predicates can at some time be also truly asserted without qualification; for the seen is so called sometimes because it is being seen, sometimes because it is capable of being seen. But the infinite does not exist potentially in the sense that it will ever actually have separate existence; it exists potentially only for knowledge. For the fact that the process of dividing never comes to an end ensures that this activity exists potentially, but not that the infinite exists separately.'

potential existence
Theta 7

Theta 7: 'What, and what kind of thing, the actual is, may be taken as explained by these and similar considerations. But we must distinguish when a thing exists potentially and when it does not; for it is not at any and every time. E.g. is earth potentially a man? No--but rather

when it has already become seed, and perhaps not even then. It is just as it is with being healed; not everything can be healed by the medical art or by luck, but there is a certain kind of thing which is capable of it, and only this is potentially healthy. And (1) the delimiting mark of that which as a result of thought comes to exist in complete reality from having existed potentially is that if the agent has willed it it comes to pass if nothing external hinders, while the condition on the other side--viz. in that which is healed--is that nothing in it hinders the result. It is on similar terms that we have what is potentially a house; if nothing in the thing acted on--i.e. in the matter--prevents it from becoming a house, and if there is nothing which must be added or taken away or changed, this is potentially a house, and the same is true of all other things the source of whose becoming is external. And (2) in the cases in which the source of the becoming is in the very thing which comes to be, a thing is potentially all those things which it will be of itself if nothing external hinders it. E.g. the seed is not yet potentially a man; for it must be deposited in something other than itself and undergo a change. But when through its own motive principle it has already got such and such attributes, in this state it is already potentially a man; while in the former state it needs another motive principle, just as earth is not yet potentially a statue (for it must first change in order to become brass).

'It seems that when we call a thing not something else but "thaten"--e.g. a casket is not "wood" but "wooden", and wood is not "earth" but "earthen", and again earth will illustrate our point if it is similarly not something else but "thaten"--that other thing is always potentially (in the full sense of that word the thing which comes after it in this series. E.g. a casket is not "earthen" nor "earth", but "wooden"; for this is potentially a casket and this is the matter of a casket, wood in general or a casket in general, and this particular wood of this particular casket. And if there is a first thing, which is no longer, in reference to something else, called "thaten", this is prime matter; e.g. if earth is "airy" and air is not "fire" but "fiery", fire is prime matter, which is not a "this". For the subject or substratum is differentiated by being a "this" or not being one; i.e. the substratum of modifications is, e.g., a man, i.e. a body and a soul, while the modification is "musical" or "pale". (The subject is called, when music comes to be present in it, not "music" but "musical", and the man is not "paleness" but "pale", and not "ambulation" or "movement" but "walking" or "moving"--which is akin to the "thaten".) Wherever this is so, then, the ultimate subject is a substance; but when this is not so but the predicate is a form and a 'this', the ultimate subject is matter and material substance. And it is only right that "thaten" should be used with reference both to the matter and to the accidents; for both are indeterminates.

'We have stated, then, when a thing is to be said to exist potentially and when it is not.

primary potency
49b13

49b13: '. . . for that which is in the primary sense potential is potential because it is possible for it to become active.'

eternal not potential
50b7

50b7: 'But (b) actuality is prior in a stricter sense also; for eternal things are prior in substance to perishable things, and no eternal thing exists potentially. The reason is this. Every potency is at one and the same time a potency of the opposite; for, while that which is not capable of being present in a subject cannot be present, everything that is capable of being may possibly not be actual. That, then, which is capable of being may either be or not be; the same thing, then, is capable both of being and of not being. And that which is capable of not being may possibly not be; and that which may possibly not be is perishable, either in the full sense, or in the precise sense in which it is said that it possibly may not be, i.e. in respect either of place or of quantity or quality; 'in the full sense' means 'in respect of substance'. Nothing, then, which is in the full sense imperishable is in the full sense potentially existent (though there is nothing to prevent its being so in some respect, e.g. potentially of a certain quality or in a certain place); all imperishable things, then, exist actually.'

potency of opposites
50b8, 30
51a6
71b19

50b8: 'Every potency is at one and the same time a potency of the opposite.'

50b30: 'But the other potencies, according to our previous discussion, are all potencies for opposites.'

51a6: 'Everything of which we say that it can do something, is alike capable of contraries.'

71b19: '. . . that which is potentially may possibly not be.'

Accident, accidental

Delta 30

E 2, 3

K 8 --> Phys II 5, 6

â 4 7a15 all that is subject is not unum per accidens

â 4 7a21 - b16 accidental predicates

Delta 2 13b34 - 14a20 accidental causes

Delta 6 15b17 unum per accidens

Delta 7 17a7 ens per accidens

E 4 27b33 per accidens [he dismissed from Met

Delta 30: "'Accident" means (1) that which attaches to something and can be truly asserted, but neither of necessity nor usually, e.g. if some one in digging a hole for a plant has found treasure. This--the finding of treasure--is for the man who dug the hole an accident; for neither does the one come of necessity from the other or after the other, nor, if a man plants, does he usually find treasure. And a musical man might be pale; but since this does not happen of necessity nor usually, we call it an accident. Therefore since there are attributes and they attach to subjects, and some of them attach to these only in a particular place and at a particular time, whatever attaches to a subject, but not because it was this subject, or the time this time, or the place this place, will be an accident. Therefore, too, there is no definite cause for an accident, but a chance cause, i.e. an indefinite one. Going to Aegina was an accident for a man, if he went not in order to get there, but because he was carried out of his way by a storm or captured by pirates. The accident has happened or exists--not in virtue of the subject's nature, however, but of something else; for the storm was the cause of his coming to a place for which he was not sailing, and this was Aegina.

'"Accident" has also (2) another meaning, i.e. all that attaches to each thing in virtue of itself but is not in its essence, as having its angles equal to two right angles attaches to the triangle. And accidents of this sort may be eternal, but no accident of the other sort is. This is explained elsewhere.'

E 2, 3: '2 But since the unqualified term "being" has several meanings, of which one was seen to be the accidental, and another the true ("nonbeing" being the false), while besides these there are the figures of predication (e.g. the "what", quality, quantity, place, time, and any similar meanings which "being" may have), and again besides all these there is that which "is" potentially or actually:--since "being" has many meanings, we must first say regarding the accidental, that there can be no scientific treatment of it. This is confirmed by the fact that no science--practical, productive, or theoretical--troubles itself about it. For on the one hand he who produces a house does not produce all the attributes that come into being along with the house; for these are innumerable; the house that has been made may quite well be pleasant for some people, hurtful to some, and useful to others, and different--to put it shortly--from all things that are; and the science of building does not aim at producing any of these attributes. And in the same way the geometer does not consider the attributes which attach thus to figures,

not whether "triangle" is different from "triangle whose angles are equal to two right angles".--And this happens naturally enough; for the accidental is practically a mere name. And so Plato was in a sense not wrong in ranking sophistic as dealing with that which is not. For the arguments of the sophists deal, we may say, above all with the accidental; e.g. the question whether "musical" and "lettered" are different or the same, and whether "musical Coriscus" and "Coriscus" are the same, and whether "everything which is, but is not eternal, has come to be", with the paradoxical conclusion that if one who was musical has come to be lettered, he must also have been lettered and have come to be musical--and all the other arguments of this sort; the accidental is obviously akin to non-being. And this is clear also from arguments such as the following: things which are in another sense come into being and pass out of being by a process, but things which are accidentally do not. But still we must, as far as we can, say further, regarding the accidental, what its nature is and from what cause it proceeds; for it will perhaps at the same time become clear why there is no science of it.

'Since, among things which are, some are always in the same state and are of necessity (not necessity in the sense of compulsion but that which we assert of things because they cannot be otherwise), and some are not of necessity nor always, but for the most part, this is the principle and this the cause of the existence of the accidental; for that which is neither always nor for the most part, we call accidental. For instance, if in the dog-days there is wintry and cold weather, we say this is an accident, but not if there is sultry heat, because the latter is always or for the most part so, but not the former. And it is an accident that a man is pale (for this is neither always nor for the most part so), but it is not by accident that he is an animal. And that the builder produces health is an accident, because it is the nature not of the builder but of the doctor to do this--but the builder happened to be a doctor. Again, a confectioner, aiming at giving pleasure, may make something wholesome, but not in virtue of the confectioner's art; and therefore we say "it was an accident", and while there is a sense in which he makes it, in the unqualified sense he does not. For to other things answer faculties productive of them, but to accidental results there corresponds no determinate art nor faculty; for of things which are or come to be by accident, the cause also is accidental. Therefore, since not all things either are or come to be of necessity and always, but the majority of things are for the most part, the accidental must exist; for instance a pale man is not always nor for the most part musical, but since this sometimes happens, it must be accidental (if not, everything will be of necessity). The matter, therefore, which is capable of being otherwise than as it usually is, must be the cause of the accidental. And we must take as our starting-point the question whether there is nothing that is neither always nor for the most part. Surely this is impossible. There is, then, besides these something which is fortuitous and accidental. But while the usual exists, can nothing be said to be always, or are there eternal things? This must be considered later, but that there is no science of the accidental is obvious; for all science is either of that which is always or of that which is for the most part. (For how else is one to learn or to teach another? The thing must be determined as occurring either always or for the most part, e.g. that honey-water is useful for a patient in a fever is true for the most part). But that which is contrary to the usual law science will be

unable to state, i.e. when the thing does not happen, e.g. "on the day of new moon"; for even that which happens on the day of new moon happens then either always or for the most part; but the accidental is contrary to such laws. We have stated, then, what the accidental is, and from what cause it arises, and that there is no science which deals with it.

'3 That there are principles and causes which are generable and destructible without ever being in course of being generated or destroyed, is obvious. For otherwise all things will be of necessity, since that which is being generated or destroyed must have a cause which is not accidentally its cause. Will A exist or not? It will if B happens; and if not, not. And B will exist if C happens. And thus if time is constantly subtracted from a limited extent of time, one will obviously come to the present. This man, then, will die by violence, if he goes out; and he will do this if he gets thirsty; and he will get thirsty if something else happens; and thus we shall come to that which is now present, or to some past event. For instance, he will go out if he gets thirsty; and he will get thirsty if he is eating pungent food; and this is either the case or not; so that he will of necessity die, or of necessity not die. And similarly if one jumps over to past events, the same account will hold good; for this--I mean the past condition--is already present in something. Everything, therefore, that will be, will be of necessity; e.g. it is necessary that he who lives shall one day die; for already some condition has come into existence, e.g. the presence of contraries in the same body. But whether he is to die by disease or by violence is not yet determined, but depends on the happening of something else. Clearly then the process goes back to a certain starting-point, but this no longer points to something further. This then will be the starting-point for the fortuitous, and will have nothing else as cause of its coming to be. But to what sort of starting-point and what sort of cause we thus refer the fortuitous--whether to matter or to the purpose or to the motive power, must be carefully considered.'

K 8: 'Since "being" in general has several senses, of which one is "being by accident", we must consider first that which "is" in this sense. Evidently none of the traditional sciences busies itself about the accidental. For neither does architecture consider what will happen to those who are to use the house (e.g. whether they will have a painful life in it or not), nor does weaving, or shoemaking, or the confectioner's art, do the like; but each of these sciences considers only what is peculiar to it, i.e. its proper end. And as for the argument that "when he who is musical becomes lettered he will be both at once, not having been both before; and that which is, not always having been, must have come to be; therefore he must have at once become musical and lettered"--this none of the recognized sciences considers, but only sophistic; for this alone busies about the accidental, so that Plato is not far wrong when he says that the sophist spends his time on non-being.

'That a science of the accidental is not even possible will be evident if we try to see what the accidental really is. We say that everything either is always and of necessity (necessity not in the sense of violence, but that which we appeal to in demonstrations), or is for the most part, or is neither for the most part, nor always and of necessity, but merely as it chances; e.g. there might be cold in the dog-

days, but this occurs neither always and of necessity, nor for the most part, though it might happen sometimes. The accidental, then, is what occurs, but not always nor of necessity, nor for the most part. Now we have said what the accidental is, and it is obvious why there is no science of such a thing; for all science is of that which is always or for the most part, but the accidental is in neither of these classes.

'Evidently there are not causes and principles of the accidental, of the same kind as there are of the essential; for if there were, everything would be of necessity. If A is when B is, and B is when C is, and if C exists not by chance but of necessity, that also of which C was cause will exist of necessity, down to the last causatum as it is called (but this was supposed to be accidental). Therefore all things will be of necessity, and chance and the possibility of a thing's either occurring or not occurring are removed entirely from the range of events. And if the cause be supposed not to exist but to be coming to be, the same results will follow; everything will occur of necessity. For to-morrow's eclipse will occur if A occurs, and A if B occurs, and B if C occurs; and in this way if we subtract time from the limited time between now and to-morrow we shall come sometime to the already existing condition. Therefore since this exists, everything after this will occur of necessity, so that all things occur of necessity.

'As to that which "is" in the sense of being true or of being by accident, the former depends on a combination in thought and is an affection of thought (which is the reason why it is the principles, not of that which "is" in this sense, but of that which is outside and can exist apart, that are sought); and the latter is not necessary but indeterminate (I mean the accidental); and of such a thing the causes are unordered and indefinite.

'Adaptation to an end is found in events that happen by nature or as the result of thought. It is "luck" when one of these events happens by accident. For as a thing may exist, so it may be a cause, either by its own nature or by accident. Luck is an accidental cause at work in such events adapted to an end as are usually effected in accordance with purpose. And so luck and thought are concerned with the same sphere; for purpose cannot exist without thought. The causes from which lucky results might happen are indeterminate; and so luck is obscure to human calculation and is a cause by accident, but in the unqualified sense a cause of nothing. It is good or bad luck when the result is good or evil; and prosperity or misfortune when the scale of the results is large.

'Since nothing accidental is prior to the essential, neither are accidental causes prior. If, then, luck or spontaneity is a cause of the material universe, reason and nature are causes before it.'

â 4 7a15: '. . . it is impossible to enumerate all its accidental attributes, which are infinite in number.'

â 4 7a21 - b16: 'For they must say that all attributes are accidents, and that there is no such thing as "being essentially a man" or "an animal". For if there is to be any such thing as "being essentially a man" this will not be "being a non-man" or "not being a man" (yet these are negations of it); for there was one thing which it meant, and this was the substance of something. And denoting the substance of a thing means that the essence of the thing is nothing else. But if its being

essentially a man is to be the same as either being essentially a not-man or essentially not being a man, then its essence will be something else. Therefore our opponents must say that there cannot be such a definition of anything, but that all attributes are accidental; for this is the distinction between substance and accident--"white" is accidental to man, because though he is white, whiteness is not his essence. But if all statements are accidental, there will be nothing primary about which they are made, if the accidental always implies predication about a subject. The predication, then, must go on ad infinitum. But this is impossible; for not even more than two terms can be combined in accidental predication. For (1) an accident is not an accident of an accident, unless it be because both are accidents of the same subject. I mean, for instance, that the white is musical and the latter is white, only because both are accidental to man. But (2) Socrates is musical, not in this sense, that both terms are accidental to something else. Since then some predicates are accidental in this and some in that sense, (a) those which are accidental in the latter sense, in which white is accidental to Socrates, cannot form an infinite series in the upward direction; e.g. Socrates the white has not yet another accident; for no unity can be got out of such a sum. Nor again (b) will "white" have another term accidental to it, e.g. "musical". For this is no more accidental to that than that is to this; and at the same time we have drawn the distinction, that while some predicates are accidental in this sense, others are so in the sense in which "musical" is accidental to Socrates; and the accident is an accident of an accident not in cases of the latter kind, but only in cases of the other kind, so that not all terms will be accidental.'

Delta 2 13b34 - 14a20: 'Again, there are accidental causes and the classes which include these; e.g. while in one sense the "sculptor" causes the statue, in another sense "Polyclitus" causes it, because the sculptor happens to be Polyclitus; and the classes that include the accidental cause are also causes, e.g. "man"--or in general "animal"--is the cause of the statue, because Polyclitus is a man, and man is an animal. Of accidental causes also some are more remote or nearer than others, as, for instance, if "the white" and "the musical" were called causes of the statue, and not only "Polyclitus" or "man". But besides all these varieties of causes, whether proper or accidental, some are called causes as being able to act, others as acting; e.g. the cause of the house's being built is a builder or a builder who is building.--The same variety of language will be found with regard to the effects of causes; e.g. a thing may be called the cause of this statue or of a statue or in general of an image, and of this bronze or of bronze or of matter in general; and similarly in the case of accidental effects. Again, both accidental and proper causes may be spoken of in combination; e.g. we may say not "Polyclitus" nor "the sculptor", but "Polyclitus the sculptor".

'Yet all these are but six in number, while each is spoken of in two ways; for (A) they are causes either as the individual, or as the genus, or as the accidental, or as the genus that includes the accidental, and these either as combined, or as taken simply; and (B) all may be taken as acting or as having a capacity.'

Delta 6 15b17: '"One" means (1) that which is one by accident, (2) that which is one by its own nature.'

Delta 7 17a7: 'Things are said to "be" (1) in an accidental sense, (2) by their own nature.'

E 4 27b33: '. . . that which is accidentally and that which is in the sense of being true must be dismissed.'

not knowable

E 2 26b3

K 8 64b30

K 8 65a4

E 2 26b3: 'since "being" has many meanings, we must first say regarding the accidental, that there can be no scientific treatment of it.'

K 8 64b30: 'That a science of the accidental is not even possible will be evident if we try to see what the accidental really is.'

K 8 65a4: 'Now we have said what the accidental is, and it is obvious why there is no science of such a thing; for all science is of that which is always or for the most part, but the accidental is in neither of these classes.'

its cause matter

E 2 27a13

E 2 27a13: 'The matter, therefore, which is capable of being otherwise than as it usually is, must be the cause of the accidental.'

twofold

Z 6 31b22 accident ? essence (incidental)

Z 6 31b22: '(But of an accidental term, e.g. "the musical" or "the white", since it has two meanings, it is not true to say that it itself is identical with its essence; for both that to which the accidental quality belongs, and the accidental quality, are white, so that in a sense the accident and its essence are the same, and in a sense they are not; for the essence of white is not the same as the man or the white man, but it is the same as the attribute white).'

same by accident

Z 11 37b6 accidental unity (incidental)

Z 11 37b6: 'But things which are of the nature of matter, or of wholes that include matter, are not the same as their essences, nor are accidental unities like that of "Socrates" and "musical"; for these are the same only by accident.'

nothing accidentally perishable

I 10 59a1

I 10 59a1: 'For what is accidental is capable of not being present, but perishableness is one of the attributes that belong of necessity to the things to which they belong.'

essential
K 8 65a6

K 8 65a6: 'Evidently there are not causes and principles of the accidental, of the same kind as there are of the essential.'