Aristotle
Topics
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Book I

1

Our treatise proposes to find a line of inquiry whereby we shall be able to reason from opinions that are generally accepted about every problem propounded to us, and also shall ourselves, when standing up to an argument, avoid saying anything that will obstruct us. First, then, we must say what reasoning is, and what its varieties are, in order to grasp dialectical reasoning: for this is the object of our search in the treatise before us.

Now reasoning is an argument in which, certain things being laid down, something other than these necessarily comes about through them. (a) It is a 'demonstration', when the premisses from which the reasoning starts are true and primary, or are such that our knowledge of them has originally come through premisses which are primary and true: (b) reasoning, on the other hand, is 'dialectical', if it reasons from opinions that are generally accepted. Things are 'true' and 'primary' which are believed on the strength not of anything else but of themselves: for in regard to the first principles of science it is improper to ask any further for the why and wherefore of them; each of the first principles should command belief in and by itself. On the other hand, those opinions are 'generally accepted' which are accepted by every one or by the majority or by the philosophers – i.e. by all, or by the majority, or by the most notable and illustrious of them. Again (c), reasoning is 'contentious' if it starts from opinions that seem to be generally accepted, but are not really such, or again if it merely seems to reason from opinions that are or seem to be generally accepted. For not every opinion that seems to be generally accepted actually is generally accepted. For in none of the opinions which we call generally accepted is the illusion entirely on the surface, as happens in the case of the principles of contentious arguments; for the nature of the fallacy in these is obvious immediately, and as a rule even to persons with little power of comprehension. So then, of the contentious reasonings mentioned, the former really deserves to be called 'reasoning' as well, but the other should be called 'contentious reasoning', but not 'reasoning', since it appears to reason, but does not really do so. Further (d), besides all the reasonings we have mentioned there are the mis-reasonings that start from the premisses peculiar to the special sciences, as happens (for example) in the case of geometry and her sister sciences. For this form of reasoning appears to differ from the reasonings mentioned above; the man who draws a false figure reasons from things that are neither true and primary, nor yet generally accepted. For he does not fall within the definition; he does not assume opinions that are received either by every one or by the majority or by philosophers – that is to say, by all, or by most, or by the most illustrious of them – but he conducts his reasoning upon assumptions which, though appropriate to the science in question, are not true; for he effects his mis-reasoning either by describing the semicircles wrongly or by drawing certain lines in a way in which they could not be drawn.

The foregoing must stand for an outline survey of the species of reasoning. In general, in regard both to all that we have already discussed and to those which we shall discuss later, we may remark that that amount of distinction between them may serve, because it is not our purpose to give the exact definition of any of them; we merely want to describe them in outline; we consider it quite

enough from the point of view of the line of inquiry before us to be able to recognize each of them in some sort of way.

2

Next in order after the foregoing, we must say for how many and for what purposes the treatise is useful. They are three – intellectual training, casual encounters, and the philosophical sciences. That it is useful as a training is obvious on the face of it. The possession of a plan of inquiry will enable us more easily to argue about the subject proposed. For purposes of casual encounters, it is useful because when we have counted up the opinions held by most people, we shall meet them on the ground not of other people's convictions but of their own, while we shift the ground of any argument that they appear to us to state unsoundly. For the study of the philosophical sciences it is useful, because the ability to raise searching difficulties on both sides of a subject will make us detect more easily the truth and error about the several points that arise. It has a further use in relation to the ultimate bases of the principles used in the several sciences. For it is impossible to discuss them at all from the principles proper to the particular science in hand, seeing that the principles are the prius of everything else: it is through the opinions generally held on the particular points that these have to be discussed, and this task belongs properly, or most appropriately, to dialectic: for dialectic is a process of criticism wherein lies the path to the principles of all inquiries.

3

We shall be in perfect possession of the way to proceed when we are in a position like that which we occupy in regard to rhetoric and medicine and faculties of that kind: this means the doing of that which we choose with the materials that are available. For it is not every method that the rhetorician will employ to persuade, or the doctor to heal; still, if he omits none of the available means, we shall say that his grasp of the science is adequate.

4

First, then, we must see of what parts our inquiry consists. Now if we were to grasp (a) with reference to how many, and what kind of, things arguments take place, and with what materials they start, and (b) how we are to become well supplied with these, we should have sufficiently won our goal. Now the materials with which arguments start are equal in number, and are identical, with the subjects on which reasonings take place. For arguments start with 'propositions', while the subjects on which reasonings take place are 'problems'. Now every proposition and every problem indicates either a genus or a peculiarity or an accident – for the differentia too, applying as it does to a class (or genus), should be ranked together with the genus. Since, however, of what is peculiar to anything part signifies its essence, while part does not, let us divide the 'peculiar' into both the aforesaid parts, and call that part which indicates the essence a 'definition', while of the remainder let us adopt the terminology which is generally current about these things, and speak of it as a 'property'. What we have said, then, makes it clear that according to our present division, the elements turn out to be four, all told, namely either property or definition or genus or accident. Do not let any one suppose us to mean that each of these enunciated by itself constitutes a proposition or problem, but only that it is from these that both problems and propositions are formed. The difference between a problem and a proposition is a difference in the turn of the phrase. For if it be put in this way, «'An animal that walks on two feet» is the definition of man, is it not?' or

‘«Animal» is the genus of man, is it not?’ the result is a proposition: but if thus, ‘Is «an animal that walks on two feet» a definition of man or no?’ [or ‘Is «animal» his genus or no?’] the result is a problem. Similarly too in other cases. Naturally, then, problems and propositions are equal in number: for out of every proposition you will make a problem if you change the turn of the phrase.

5

We must now say what are ‘definition’, ‘property’, ‘genus’, and ‘accident’. A ‘definition’ is a phrase signifying a thing’s essence. It is rendered in the form either of a phrase in lieu of a term, or of a phrase in lieu of another phrase; for it is sometimes possible to define the meaning of a phrase as well. People whose rendering consists of a term only, try it as they may, clearly do not render the definition of the thing in question, because a definition is always a phrase of a certain kind. One may, however, use the word ‘definitory’ also of such a remark as ‘The «becoming» is «beautiful»‘, and likewise also of the question, ‘Are sensation and knowledge the same or different?’, for argument about definitions is mostly concerned with questions of sameness and difference. In a word we may call ‘definitory’ everything that falls under the same branch of inquiry as definitions; and that all the above-mentioned examples are of this character is clear on the face of them. For if we are able to argue that two things are the same or are different, we shall be well supplied by the same turn of argument with lines of attack upon their definitions as well: for when we have shown that they are not the same we shall have demolished the definition. Observe, please, that the converse of this last statement does not hold: for to show that they are the same is not enough to establish a definition. To show, however, that they are not the same is enough of itself to overthrow it.

A ‘property’ is a predicate which does not indicate the essence of a thing, but yet belongs to that thing alone, and is predicated convertibly of it. Thus it is a property of man to-be-capable of learning grammar: for if A be a man, then he is capable of learning grammar, and if he be capable of learning grammar, he is a man. For no one calls anything a ‘property’ which may possibly belong to something else, e.g. ‘sleep’ in the case of man, even though at a certain time it may happen to belong to him alone. That is to say, if any such thing were actually to be called a property, it will be called not a ‘property’ absolutely, but a ‘temporary’ or a ‘relative’ property: for ‘being on the right hand side’ is a temporary property, while ‘two-footed’ is in point of fact ascribed as a property in certain relations; e.g. it is a property of man relatively to a horse and a dog. That nothing which may belong to anything else than A is a convertible predicate of A is clear: for it does not necessarily follow that if something is asleep it is a man.

A ‘genus’ is what is predicated in the category of essence of a number of things exhibiting differences in kind. We should treat as predicates in the category of essence all such things as it would be appropriate to mention in reply to the question, ‘What is the object before you?’; as, for example, in the case of man, if asked that question, it is appropriate to say ‘He is an animal’. The question, ‘Is one thing in the same genus as another or in a different one?’ is also a ‘generic’ question; for a question of that kind as well falls under the same branch of inquiry as the genus: for having argued that ‘animal’ is the genus of man, and likewise also of ox, we shall have argued that they are in the same genus; whereas if we show that it is the genus of the one but not of the other, we shall have argued that these things are not in the same genus.

An ‘accident’ is (i) something which, though it is none of the foregoing – i.e. neither a definition nor a property nor a genus yet belongs to the thing: (something which may possibly either belong or not belong to any one and the self-same thing, as (e.g.) the ‘sitting posture’ may belong or not belong to some self-same thing. Likewise also ‘whiteness’, for there is nothing to prevent the same

thing being at one time white, and at another not white. Of the definitions of accident the second is the better: for if he adopts the first, any one is bound, if he is to understand it, to know already what ‘definition’ and ‘genus’ and ‘property’ are, whereas the second is sufficient of itself to tell us the essential meaning of the term in question. To Accident are to be attached also all comparisons of things together, when expressed in language that is drawn in any kind of way from what happens (accidit) to be true of them; such as, for example, the question, ‘Is the honourable or the expedient preferable?’ and ‘Is the life of virtue or the life of self-indulgence the pleasanter?’, and any other problem which may happen to be phrased in terms like these. For in all such cases the question is ‘to which of the two does the predicate in question happen (accidit) to belong more closely?’ It is clear on the face of it that there is nothing to prevent an accident from becoming a temporary or relative property. Thus the sitting posture is an accident, but will be a temporary property, whenever a man is the only person sitting, while if he be not the only one sitting, it is still a property relatively to those who are not sitting. So then, there is nothing to prevent an accident from becoming both a relative and a temporary property; but a property absolutely it will never be.

6

We must not fail to observe that all remarks made in criticism of a ‘property’ and ‘genus’ and ‘accident’ will be applicable to ‘definitions’ as well. For when we have shown that the attribute in question fails to belong only to the term defined, as we do also in the case of a property, or that the genus rendered in the definition is not the true genus, or that any of the things mentioned in the phrase used does not belong, as would be remarked also in the case of an accident, we shall have demolished the definition; so that, to use the phrase previously employed,’ all the points we have enumerated might in a certain sense be called ‘definitory’. But we must not on this account expect to find a single line of inquiry which will apply universally to them all: for this is not an easy thing to find, and, even were one found, it would be very obscure indeed, and of little service for the treatise before us. Rather, a special plan of inquiry must be laid down for each of the classes we have distinguished, and then, starting from the rules that are appropriate in each case, it will probably be easier to make our way right through the task before us. So then, as was said before,’ we must outline a division of our subject, and other questions we must relegate each to the particular branch to which it most naturally belongs, speaking of them as ‘definitory’ and ‘generic’ questions. The questions I mean have practically been already assigned to their several branches.

7

First of all we must define the number of senses borne by the term ‘Sameness’. Sameness would be generally regarded as falling, roughly speaking, into three divisions. We generally apply the term numerically or specifically or generically – numerically in cases where there is more than one name but only one thing, e.g. ‘doublet’ and ‘cloak’; specifically, where there is more than one thing, but they present no differences in respect of their species, as one man and another, or one horse and another: for things like this that fall under the same species are said to be ‘specifically the same’. Similarly, too, those things are called generically the same which fall under the same genus, such as a horse and a man. It might appear that the sense in which water from the same spring is called ‘the same water’ is somehow different and unlike the senses mentioned above: but really such a case as this ought to be ranked in the same class with the things that in one way or another are called ‘the same’ in view of unity of species. For all such things seem to be of one family and to resemble one another. For the reaon why all water is said to be specifically the same as all other water is because

of a certain likeness it bears to it, and the only difference in the case of water drawn from the same spring is this, that the likeness is more emphatic: that is why we do not distinguish it from the things that in one way or another are called ‘the same’ in view of unity of species. It is generally supposed that the term ‘the same’ is most used in a sense agreed on by every one when applied to what is numerically one. But even so, it is apt to be rendered in more than one sense; its most literal and primary use is found whenever the sameness is rendered in reference to an alternative name or definition, as when a cloak is said to be the same as a doublet, or an animal that walks on two feet is said to be the same as a man: a second sense is when it is rendered in reference to a property, as when what can acquire knowledge is called the same as a man, and what naturally travels upward the same as fire: while a third use is found when it is rendered in reference to some term drawn from Accident, as when the creature who is sitting, or who is musical, is called the same as Socrates. For all these uses mean to signify numerical unity. That what I have just said is true may be best seen where one form of appellation is substituted for another. For often when we give the order to call one of the people who are sitting down, indicating him by name, we change our description, whenever the person to whom we give the order happens not to understand us; he will, we think, understand better from some accidental feature; so we bid him call to us ‘the man who is sitting’ or ‘who is conversing over there’ – clearly supposing ourselves to be indicating the same object by its name and by its accident.

8

Of ‘sameness’ then, as has been said,’ three senses are to be distinguished. Now one way to confirm that the elements mentioned above are those out of which and through which and to which arguments proceed, is by induction: for if any one were to survey propositions and problems one by one, it would be seen that each was formed either from the definition of something or from its property or from its genus or from its accident. Another way to confirm it is through reasoning. For every predicate of a subject must of necessity be either convertible with its subject or not: and if it is convertible, it would be its definition or property, for if it signifies the essence, it is the definition; if not, it is a property: for this was what a property is, viz. what is predicated convertibly, but does not signify the essence. If, on the other hand, it is not predicated convertibly of the thing, it either is or is not one of the terms contained in the definition of the subject: and if it be one of those terms, then it will be the genus or the differentia, inasmuch as the definition consists of genus and differentiae; whereas, if it be not one of those terms, clearly it would be an accident, for accident was said’ to be what belongs as an attribute to a subject without being either its definition or its genus or a property.

9

Next, then, we must distinguish between the classes of predicates in which the four orders in question are found. These are ten in number: Essence, Quantity, Quality, Relation, Place, Time, Position, State, Activity, Passivity. For the accident and genus and property and definition of anything will always be in one of these categories: for all the propositions found through these signify either something’s essence or its quality or quantity or some one of the other types of predicate. It is clear, too, on the face of it that the man who signifies something’s essence signifies sometimes a substance, sometimes a quality, sometimes some one of the other types of predicate. For when man is set before him and he says that what is set there is ‘a man’ or ‘an animal’, he states its essence and signifies a substance; but when a white colour is set before him and he says that

what is set there is ‘white’ or is ‘a colour’, he states its essence and signifies a quality. Likewise, also, if a magnitude of a cubit be set before him and he says that what is set there is a magnitude of a cubit, he will be describing its essence and signifying a quantity. Likewise, also, in the other cases: for each of these kinds of predicate, if either it be asserted of itself, or its genus be asserted of it, signifies an essence: if, on the other hand, one kind of predicate is asserted of another kind, it does not signify an essence, but a quantity or a quality or one of the other kinds of predicate. Such, then, and so many, are the subjects on which arguments take place, and the materials with which they start. How we are to acquire them, and by what means we are to become well supplied with them, falls next to be told.

10

First, then, a definition must be given of a ‘dialectical proposition’ and a ‘dialectical problem’. For it is not every proposition nor yet every problem that is to be set down as dialectical: for no one in his senses would make a proposition of what no one holds, nor yet make a problem of what is obvious to everybody or to most people: for the latter admits of no doubt, while to the former no one would assent. Now a dialectical proposition consists in asking something that is held by all men or by most men or by the philosophers, i.e. either by all, or by most, or by the most notable of these, provided it be not contrary to the general opinion; for a man would probably assent to the view of the philosophers, if it be not contrary to the opinions of most men. Dialectical propositions also include views which are like those generally accepted; also propositions which contradict the contraries of opinions that are taken to be generally accepted, and also all opinions that are in accordance with the recognized arts. Thus, supposing it to be a general opinion that the knowledge of contraries is the same, it might probably pass for a general opinion also that the perception of contraries is the same: also, supposing it to be a general opinion that there is but one single science of grammar, it might pass for a general opinion that there is but one science of flute-playing as well, whereas, if it be a general opinion that there is more than one science of grammar, it might pass for a general opinion that there is more than one science of flute-playing as well: for all these seem to be alike and akin. Likewise, also, propositions contradicting the contraries of general opinions will pass as general opinions: for if it be a general opinion that one ought to do good to one’s friends, it will also be a general opinion that one ought not to do them harm. Here, that one ought to do harm to one’s friends is contrary to the general view, and that one ought not to do them harm is the contradictory of that contrary. Likewise also, if one ought to do good to one’s friends, one ought not to do good to one’s enemies: this too is the contradictory of the view contrary to the general view; the contrary being that one ought to do good to one’s enemies. Likewise, also, in other cases. Also, on comparison, it will look like a general opinion that the contrary predicate belongs to the contrary subject: e.g. if one ought to do good to one’s friends, one ought also to do evil to one’s enemies. it might appear also as if doing good to one’s friends were a contrary to doing evil to one’s enemies: but whether this is or is not so in reality as well will be stated in the course of the discussion upon contraries. Clearly also, all opinions that are in accordance with the arts are dialectical propositions; for people are likely to assent to the views held by those who have made a study of these things, e.g. on a question of medicine they will agree with the doctor, and on a question of geometry with the geometrician; and likewise also in other cases.

11

A dialectical problem is a subject of inquiry that contributes either to choice and avoidance, or to truth and knowledge, and that either by itself, or as a help to the solution of some other such problem. It must, moreover, be something on which either people hold no opinion either way, or the masses hold a contrary opinion to the philosophers, or the philosophers to the masses, or each of them among themselves. For some problems it is useful to know with a view to choice or avoidance, e.g. whether pleasure is to be chosen or not, while some it is useful to know merely with a view to knowledge, e.g. whether the universe is eternal or not: others, again, are not useful in and by themselves for either of these purposes, but yet help us in regard to some such problems; for there are many things which we do not wish to know in and by themselves, but for the sake of other things, in order that through them we may come to know something else. Problems also include questions in regard to which reasonings conflict (the difficulty then being whether so – and so is so or not, there being convincing arguments for both views); others also in regard to which we have no argument because they are so vast, and we find it difficult to give our reasons, e.g. the question whether the universe is eternal or no: for into questions of that kind too it is possible to inquire.

Problems, then, and propositions are to be defined as aforesaid. A ‘thesis’ is a supposition of some eminent philosopher that conflicts with the general opinion; e.g. the view that contradiction is impossible, as Antisthenes said; or the view of Heraclitus that all things are in motion; or that Being is one, as Melissus says: for to take notice when any ordinary person expresses views contrary to men’s usual opinions would be silly. Or it may be a view about which we have a reasoned theory contrary to men’s usual opinions, e.g. the view maintained by the sophists that what is need not in every case either have come to be or be eternal: for a musician who is a grammarian ‘is’ so without ever having ‘come to be’ so, or being so eternally. For even if a man does not accept this view, he might do so on the ground that it is reasonable.

Now a ‘thesis’ also is a problem, though a problem is not always a thesis, inasmuch as some problems are such that we have no opinion about them either way. That a thesis, however, also forms a problem, is clear: for it follows of necessity from what has been said that either the mass of men disagree with the philosophers about the thesis, or that the one or the other class disagree among themselves, seeing that the thesis is a supposition in conflict with general opinion. Practically all dialectical problems indeed are now called ‘theses’. But it should make no difference whichever description is used; for our object in thus distinguishing them has not been to create a terminology, but to recognize what differences happen to be found between them.

Not every problem, nor every thesis, should be examined, but only one which might puzzle one of those who need argument, not punishment or perception. For people who are puzzled to know whether one ought to honour the gods and love one’s parents or not need punishment, while those who are puzzled to know whether snow is white or not need perception. The subjects should not border too closely upon the sphere of demonstration, nor yet be too far removed from it: for the former cases admit of no doubt, while the latter involve difficulties too great for the art of the trainer.

12

Having drawn these definitions, we must distinguish how many species there are of dialectical arguments. There is on the one hand Induction, on the other Reasoning. Now what reasoning is has been said before: induction is a passage from individuals to universals, e.g. the argument that supposing the skilled pilot is the most effective, and likewise the skilled charioteer, then in general the skilled man is the best at his particular task. Induction is the more convincing and clear: it is

more readily learnt by the use of the senses, and is applicable generally to the mass of men, though reasoning is more forcible and effective against contradictious people.

13

The classes, then, of things about which, and of things out of which, arguments are constructed, are to be distinguished in the way we have said before. The means whereby we are to become well supplied with reasonings are four: (1) the securing of propositions; (2) the power to distinguish in how many senses particular expression is used; (3) the discovery of the differences of things; (4) the investigation of likeness. The last three, as well, are in a certain sense propositions: for it is possible to make a proposition corresponding to each of them, e.g. (1) 'The desirable may mean either the honourable or the pleasant or the expedient'; and (2) Sensation differs from knowledge in that the latter may be recovered again after it has been lost, while the former cannot'; and (3) The relation of the healthy to health is like that of the vigorous to vigour'. The first proposition depends upon the use of one term in several senses, the second upon the differences of things, the third upon their likenesses.

14

Propositions should be selected in a number of ways corresponding to the number of distinctions drawn in regard to the proposition: thus one may first take in hand the opinions held by all or by most men or by the philosophers, i.e. by all, or most, or the most notable of them; or opinions contrary to those that seem to be generally held; and, again, all opinions that are in accordance with the arts. We must make propositions also of the contradictories of opinions contrary to those that seem to be generally held, as was laid down before. It is useful also to make them by selecting not only those opinions that actually are accepted, but also those that are like these, e.g. 'The perception of contraries is the same' – the knowledge of them being so – and 'we see by admission of something into ourselves, not by an emission'; for so it is, too, in the case of the other senses; for in hearing we admit something into ourselves; we do not emit; and we taste in the same way. Likewise also in the other cases. Moreover, all statements that seem to be true in all or in most cases, should be taken as a principle or accepted position; for they are posited by those who do not also see what exception there may be. We should select also from the written handbooks of argument, and should draw up sketch-lists of them upon each several kind of subject, putting them down under separate headings, e.g. 'On Good', or 'On Life' – and that 'On Good' should deal with every form of good, beginning with the category of essence. In the margin, too, one should indicate also the opinions of individual thinkers, e.g. 'Empedocles said that the elements of bodies were four': for any one might assent to the saying of some generally accepted authority.

Of propositions and problems there are – to comprehend the matter in outline – three divisions: for some are ethical propositions, some are on natural philosophy, while some are logical. Propositions such as the following are ethical, e.g. 'Ought one rather to obey one's parents or the laws, if they disagree?'; such as this are logical, e.g. 'Is the knowledge of opposites the same or not?'; while such as this are on natural philosophy, e.g. 'Is the universe eternal or not?' Likewise also with problems. The nature of each of the aforesaid kinds of proposition is not easily rendered in a definition, but we have to try to recognize each of them by means of the familiarity attained through induction, examining them in the light of the illustrations given above.

For purposes of philosophy we must treat of these things according to their truth, but for dialectic only with an eye to general opinion. All propositions should be taken in their most universal form;

then, the one should be made into many. E.g. ‘The knowledge of opposites is the same’; next, ‘The knowledge of contraries is the same’, and that ‘of relative terms’. In the same way these two should again be divided, as long as division is possible, e.g. the knowledge of ‘good and evil’, of ‘white and black’, or ‘cold and hot’. Likewise also in other cases.

15

On the formation, then, of propositions, the above remarks are enough. As regards the number of senses a term bears, we must not only treat of those terms which bear different senses, but we must also try to render their definitions; e.g. we must not merely say that justice and courage are called ‘good’ in one sense, and that what conduces to vigour and what conduces to health are called so in another, but also that the former are so called because of a certain intrinsic quality they themselves have, the latter because they are productive of a certain result and not because of any intrinsic quality in themselves. Similarly also in other cases.

Whether a term bears a number of specific meanings or one only, may be considered by the following means. First, look and see if its contrary bears a number of meanings, whether the discrepancy between them be one of kind or one of names. For in some cases a difference is at once displayed even in the names; e.g. the contrary of ‘sharp’ in the case of a note is ‘flat’, while in the case of a solid edge it is ‘dull’. Clearly, then, the contrary of ‘sharp’ bears several meanings, and if so, also does ‘sharp’; for corresponding to each of the former terms the meaning of its contrary will be different. For ‘sharp’ will not be the same when contrary to ‘dull’ and to ‘flat’, though ‘sharp’ is the contrary of each. Again Barhu (‘flat’, ‘heavy’) in the case of a note has ‘sharp’ as its contrary, but in the case of a solid mass ‘light’, so that Barhu is used with a number of meanings, inasmuch as its contrary also is so used. Likewise, also, ‘fine’ as applied to a picture has ‘ugly’ as its contrary, but, as applied to a house, ‘ramshackle’; so that ‘fine’ is an ambiguous term.

In some cases there is no discrepancy of any sort in the names used, but a difference of kind between the meanings is at once obvious: e.g. in the case of ‘clear’ and ‘obscure’: for sound is called ‘clear’ and ‘obscure’, just as ‘colour’ is too. As regards the names, then, there is no discrepancy, but the difference in kind between the meanings is at once obvious: for colour is not called ‘clear’ in a like sense to sound. This is plain also through sensation: for of things that are the same in kind we have the same sensation, whereas we do not judge clearness by the same sensation in the case of sound and of colour, but in the latter case we judge by sight, in the former by hearing. Likewise also with ‘sharp’ and ‘dull’ in regard to flavours and solid edges: here in the latter case we judge by touch, but in the former by taste. For here again there is no discrepancy in the names used, in the case either of the original terms or of their contraries: for the contrary also of sharp in either sense is ‘dull’.

Moreover, see if one sense of a term has a contrary, while another has absolutely none; e.g. the pleasure of drinking has a contrary in the pain of thirst, whereas the pleasure of seeing that the diagonal is incommensurate with the side has none, so that ‘pleasure’ is used in more than one sense. To ‘love’ also, used of the frame of mind, has to ‘hate’ as its contrary, while as used of the physical activity (kissing) it has none: clearly, therefore, to ‘love’ is an ambiguous term. Further, see in regard to their intermediates, if some meanings and their contraries have an intermediate, others have none, or if both have one but not the same one, e.g. ‘clear’ and ‘obscure’ in the case of colours have ‘grey’ as an intermediate, whereas in the case of sound they have none, or, if they have, it is ‘harsh’, as some people say that a harsh sound is intermediate. ‘Clear’, then, is an ambiguous term, and likewise also ‘obscure’. See, moreover, if some of them have more than one intermediate, while others have but one, as is the case with ‘clear’ and ‘obscure’, for in the case of

colours there are numbers of intermediates, whereas in regard to sound there is but one, viz. ‘harsh’.

Again, in the case of the contradictory opposite, look and see if it bears more than one meaning. For if this bears more than one meaning, then the opposite of it also will be used in more than one meaning; e.g. ‘to fail to see’ a phrase with more than one meaning, viz. (1) to fail to possess the power of sight, (2) to fail to put that power to active use. But if this has more than one meaning, it follows necessarily that ‘to see’ also has more than one meaning: for there will be an opposite to each sense of ‘to fail to see’; e.g. the opposite of ‘not to possess the power of sight’ is to possess it, while of ‘not to put the power of sight to active use’, the opposite is to put it to active use.

Moreover, examine the case of terms that denote the privation or presence of a certain state: for if the one term bears more than one meaning, then so will the remaining term: e.g. if ‘to have sense’ be used with more than one meaning, as applied to the soul and to the body, then ‘to be wanting in sense’ too will be used with more than one meaning, as applied to the soul and to the body. That the opposition between the terms now in question depends upon the privation or presence of a certain state is clear, since animals naturally possess each kind of ‘sense’, both as applied to the soul and as applied to the body.

Moreover, examine the inflected forms. For if ‘justly’ has more than one meaning, then ‘just’, also, will be used with more than one meaning; for there will be a meaning of ‘just’ to each of the meanings of ‘justly’; e.g. if the word ‘justly’ be used of judging according to one’s own opinion, and also of judging as one ought, then ‘just’ also will be used in like manner. In the same way also, if ‘healthy’ has more than one meaning, then ‘healthily’ also will be used with more than one meaning: e.g. if ‘healthy’ describes both what produces health and what preserves health and what betokens health, then ‘healthily’ also will be used to mean ‘in such a way as to produce’ or ‘preserve’ or ‘betoken’ health. Likewise also in other cases, whenever the original term bears more than one meaning, the inflexion also that is formed from it will be used with more than one meaning, and vice versa.

Look also at the classes of the predicates signified by the term, and see if they are the same in all cases. For if they are not the same, then clearly the term is ambiguous: e.g. ‘good’ in the case of food means ‘productive of pleasure’, and in the case of medicine ‘productive of health’, whereas as applied to the soul it means to be of a certain quality, e.g. temperate or courageous or just: and likewise also, as applied to ‘man’. Sometimes it signifies what happens at a certain time, as (e.g.) the good that happens at the right time: for what happens at the right time is called good. Often it signifies what is of certain quantity, e.g. as applied to the proper amount: for the proper amount too is called good. So then the term ‘good’ is ambiguous. In the same way also ‘clear’, as applied to a body, signifies a colour, but in regard to a note it denotes what is ‘easy to hear’. ‘Sharp’, too, is in a closely similar case: for the same term does not bear the same meaning in all its applications: for a sharp note is a swift note, as the mathematical theorists of harmony tell us, whereas a sharp (acute) angle is one that is less than a right angle, while a sharp dagger is one containing a sharp angle (point).

Look also at the genera of the objects denoted by the same term, and see if they are different without being subaltern, as (e.g.) ‘donkey’, which denotes both the animal and the engine. For the definition of them that corresponds to the name is different: for the one will be declared to be an animal of a certain kind, and the other to be an engine of a certain kind. If, however, the genera be subaltern, there is no necessity for the definitions to be different. Thus (e.g.) ‘animal’ is the genus of ‘raven’, and so is ‘bird’. Whenever therefore we say that the raven is a bird, we also say that it is a certain kind of animal, so that both the genera are predicated of it. Likewise also whenever we call the raven a ‘flying biped animal’, we declare it to be a bird: in this way, then, as well, both the

genera are predicated of raven, and also their definition. But in the case of genera that are not subaltern this does not happen, for whenever we call a thing an ‘engine’, we do not call it an animal, nor vice versa.

Look also and see not only if the genera of the term before you are different without being subaltern, but also in the case of its contrary: for if its contrary bears several senses, clearly the term before you does so as well.

It is useful also to look at the definition that arises from the use of the term in combination, e.g. of a ‘clear (lit. white) body’ of a ‘clear note’. For then if what is peculiar in each case be abstracted, the same expression ought to remain over. This does not happen in the case of ambiguous terms, e.g. in the cases just mentioned. For the former will be body possessing such and such a colour’, while the latter will be ‘a note easy to hear’. Abstract, then, ‘a body ‘and’ a note’, and the remainder in each case is not the same. It should, however, have been had the meaning of ‘clear’ in each case been synonymous.

Often in the actual definitions as well ambiguity creeps in unawares, and for this reason the definitions also should be examined. If (e.g.) any one describes what betokens and what produces health as ‘related commensurably to health’, we must not desist but go on to examine in what sense he has used the term ‘commensurably’ in each case, e.g. if in the latter case it means that ‘it is of the right amount to produce health’, whereas in the for it means that ‘it is such as to betoken what kind of state prevails’.

Moreover, see if the terms cannot be compared as ‘more or less’ or as ‘in like manner’, as is the case (e.g.) with a ‘clear’ (lit. white) sound and a ‘clear’ garment, and a ‘sharp’ flavour and a ‘sharp’ note. For neither are these things said to be clear or sharp ‘in a like degree’, nor yet is the one said to be clearer or sharper than the other. ‘Clear’, then, and ‘sharp’ are ambiguous. For synonyms are always comparable; for they will always be used either in like manner, or else in a greater degree in one case.

Now since of genera that are different without being subaltern the differentiae also are different in kind, e.g. those of ‘animal’ and ‘knowledge’ (for the differentiae of these are different), look and see if the meanings comprised under the same term are differentiae of genera that are different without being subaltern, as e.g. ‘sharp’ is of a ‘note’ and a ‘solid’. For being ‘sharp’ differentiates note from note, and likewise also one solid from another. ‘Sharp’, then, is an ambiguous term: for it forms differentiae of genera that are different without being subaltern.

Again, see if the actual meanings included under the same term themselves have different differentiae, e.g. ‘colour’ in bodies and ‘colour’ in tunes: for the differentiae of ‘colour’ in bodies are ‘sight-piercing’ and ‘sight compressing’, whereas ‘colour’ in melodies has not the same differentiae. Colour, then, is an ambiguous term; for things that are the same have the same differentiae.

Moreover, since the species is never the differentia of anything, look and see if one of the meanings included under the same term be a species and another a differentia, as (e.g.) clear’ (lit. white) as applied to a body is a species of colour, whereas in the case of a note it is a differentia; for one note is differentiated from another by being ‘clear’.

16

The presence, then, of a number of meanings in a term may be investigated by these and like means. The differences which things present to each other should be examined within the same genera, e.g. ‘Wherein does justice differ from courage, and wisdom from temperance?’ – for all these belong to the same genus; and also from one genus to another, provided they be not very

much too far apart, e.g. ‘Wherein does sensation differ from knowledge?: for in the case of genera that are very far apart, the differences are entirely obvious.

17

Likeness should be studied, first, in the case of things belonging to different genera, the formulae being ‘A:B = C:D’ (e.g. as knowledge stands to the object of knowledge, so is sensation related to the object of sensation), and ‘As A is in B, so is C in D’ (e.g. as sight is in the eye, so is reason in the soul, and as is a calm in the sea, so is windlessness in the air). Practice is more especially needed in regard to terms that are far apart; for in the case of the rest, we shall be more easily able to see in one glance the points of likeness. We should also look at things which belong to the same genus, to see if any identical attribute belongs to them all, e.g. to a man and a horse and a dog; for in so far as they have any identical attribute, in so far they are alike.

18

It is useful to have examined the number of meanings of a term both for clearness’ sake (for a man is more likely to know what it is he asserts, if it bas been made clear to him how many meanings it may have), and also with a view to ensuring that our reasonings shall be in accordance with the actual facts and not addressed merely to the term used. For as long as it is not clear in how many senses a term is used, it is possible that the answerer and the questioner are not directing their minds upon the same thing: whereas when once it has been made clear how many meanings there are, and also upon which of them the former directs his mind when he makes his assertion, the questioner would then look ridiculous if he failed to address his argument to this. It helps us also both to avoid being misled and to mislead by false reasoning: for if we know the number of meanings of a term, we shall certainly never be misled by false reasoning, but shall know if the questioner fails to address his argument to the same point; and when we ourselves put the questions we shall be able to mislead him, if our answerer happens not to know the number of meanings of our terms. This, however, is not possible in all cases, but only when of the many senses some are true and others are false. This manner of argument, however, does not belong properly to dialectic; dialecticians should therefore by all means beware of this kind of verbal discussion, unless any one is absolutely unable to discuss the subject before him in any other way.

The discovery of the differences of things helps us both in reasonings about sameness and difference, and also in recognizing what any particular thing is. That it helps us in reasoning about sameness and difference is clear: for when we have discovered a difference of any kind whatever between the objects before us, we shall already have shown that they are not the same: while it helps us in recognizing what a thing is, because we usually distinguish the expression that is proper to the essence of each particular thing by means of the differentiae that are proper to it.

The examination of likeness is useful with a view both to inductive arguments and to hypothetical reasonings, and also with a view to the rendering of definitions. It is useful for inductive arguments, because it is by means of an induction of individuals in cases that are alike that we claim to bring the universal in evidence: for it is not easy to do this if we do not know the points of likeness. It is useful for hypothetical reasonings because it is a general opinion that among similars what is true of one is true also of the rest. If, then, with regard to any of them we are well supplied with matter for a discussion, we shall secure a preliminary admission that however it is in these cases, so it is also in the case before us: then when we have shown the former we shall have shown, on the strength of the hypothesis, the matter before us as well: for we have first made the hypothesis that

however it is in these cases, so it is also in the case before us, and have then proved the point as regards these cases. It is useful for the rendering of definitions because, if we are able to see in one glance what is the same in each individual case of it, we shall be at no loss into what genus we ought to put the object before us when we define it: for of the common predicates that which is most definitely in the category of essence is likely to be the genus. Likewise, also, in the case of objects widely divergent, the examination of likeness is useful for purposes of definition, e.g. the sameness of a calm at sea, and windlessness in the air (each being a form of rest), and of a point on a line and the unit in number – each being a starting point. If, then, we render as the genus what is common to all the cases, we shall get the credit of defining not inappropriately. Definition-mongers too nearly always render them in this way: they declare the unit to be the startingpoint of number, and the point the startingpoint of a line. It is clear, then, that they place them in that which is common to both as their genus.

The means, then, whereby reasonings are effected, are these: the commonplace rules, for the observance of which the aforesaid means are useful, are as follows.

Book II

1

Of problems some are universal, others particular. Universal problems are such as ‘Every pleasure is good’ and ‘No pleasure is good’; particular problems are such as ‘Some pleasure is good’ and ‘Some pleasure is not good’. The methods of establishing and overthrowing a view universally are common to both kinds of problems; for when we have shown that a predicate belongs in every case, we shall also have shown that it belongs in some cases. Likewise, also, if we show that it does not belong in any case, we shall also have shown that it does not belong in every case. First, then, we must speak of the methods of overthrowing a view universally, because such are common to both universal and particular problems, and because people more usually introduce theses asserting a predicate than denying it, while those who argue with them overthrow it. The conversion of an appropriate name which is drawn from the element ‘accident’ is an extremely precarious thing; for in the case of accidents and in no other it is possible for something to be true conditionally and not universally. Names drawn from the elements ‘definition’ and ‘property’ and ‘genus’ are bound to be convertible; e.g. if ‘to be an animal that walks on two feet is an attribute of S’, then it will be true by conversion to say that ‘S is an animal that walks on two feet’. Likewise, also, if drawn from the genus; for if ‘to be an animal is an attribute of S’, then ‘S is an animal’. The same is true also in the case of a property; for if ‘to be capable of learning grammar is an attribute of S’, then ‘S will be capable of learning grammar’. For none of these attributes can possibly belong or not belong in part; they must either belong or not belong absolutely. In the case of accidents, on the other hand, there is nothing to prevent an attribute (e.g. whiteness or justice) belonging in part, so that it is not enough to show that whiteness or justice is an attribute of a man in order to show that he is white or just; for it is open to dispute it and say that he is white or just in part only. Conversion, then, is not a necessary process in the case of accidents.

We must also define the errors that occur in problems. They are of two kinds, caused either by false statement or by transgression of the established diction. For those who make false statements, and say that an attribute belongs to thing which does not belong to it, commit error; and those who call

objects by the names of other objects (e.g. calling a planetree a ‘man’) transgress the established terminology.

2

Now one commonplace rule is to look and see if a man has ascribed as an accident what belongs in some other way. This mistake is most commonly made in regard to the genera of things, e.g. if one were to say that white happens (accidit) to be a colour – for being a colour does not happen by accident to white, but colour is its genus. The assertor may of course define it so in so many words, saying (e.g.) that ‘Justice happens (accidit) to be a virtue’; but often even without such definition it is obvious that he has rendered the genus as an accident; e.g. suppose that one were to say that whiteness is coloured or that walking is in motion. For a predicate drawn from the genus is never ascribed to the species in an inflected form, but always the genera are predicated of their species literally; for the species take on both the name and the definition of their genera. A man therefore who says that white is ‘coloured’ has not rendered ‘coloured’ as its genus, seeing that he has used an inflected form, nor yet as its property or as its definition: for the definition and property of a thing belong to it and to nothing else, whereas many things besides white are coloured, e.g. a log, a stone, a man, and a horse. Clearly then he renders it as an accident.

Another rule is to examine all cases where a predicate has been either asserted or denied universally to belong to something. Look at them species by species, and not in their infinite multitude: for then the inquiry will proceed more directly and in fewer steps. You should look and begin with the most primary groups, and then proceed in order down to those that are not further divisible: e.g. if a man has said that the knowledge of opposites is the same, you should look and see whether it be so of relative opposites and of contraries and of terms signifying the privation or presence of certain states, and of contradictory terms. Then, if no clear result be reached so far in these cases, you should again divide these until you come to those that are not further divisible, and see (e.g.) whether it be so of just deeds and unjust, or of the double and the half, or of blindness and sight, or of being and not-being: for if in any case it be shown that the knowledge of them is not the same we shall have demolished the problem. Likewise, also, if the predicate belongs in no case. This rule is convertible for both destructive and constructive purposes: for if, when we have suggested a division, the predicate appears to hold in all or in a large number of cases, we may then claim that the other should actually assert it universally, or else bring a negative instance to show in what case it is not so: for if he does neither of these things, a refusal to assert it will make him look absurd.

Another rule is to make definitions both of an accident and of its subject, either of both separately or else of one of them, and then look and see if anything untrue has been assumed as true in the definitions. Thus (e.g.) to see if it is possible to wrong a god, ask what is ‘to wrong’? For if it be ‘to injure deliberately’, clearly it is not possible for a god to be wronged: for it is impossible that God should be injured. Again, to see if the good man is jealous, ask who is the ‘jealous’ man and what is ‘jealousy’. For if ‘jealousy’ is pain at the apparent success of some well-behaved person, clearly the good man is not jealous: for then he would be bad. Again, to see if the indignant man is jealous, ask who each of them is: for then it will be obvious whether the statement is true or false; e.g. if he is ‘jealous’ who grieves at the successes of the good, and he is ‘indignant’ who grieves at the successes of the evil, then clearly the indignant man would not be jealous. A man should substitute definitions also for the terms contained in his definitions, and not stop until he comes to a familiar term: for often if the definition be rendered whole, the point at issue is not cleared up, whereas if for one of the terms used in the definition a definition be stated, it becomes obvious.

Moreover, a man should make the problem into a proposition for himself, and then bring a negative instance against it: for the negative instance will be a ground of attack upon the assertion. This rule is very nearly the same as the rule to look into cases where a predicate has been attributed or denied universally: but it differs in the turn of the argument.
Moreover, you should define what kind of things should be called as most men call them, and what should not. For this is useful both for establishing and for overthrowing a view: e.g. you should say that we ought to use our terms to mean the same things as most people mean by them, but when we ask what kind of things are or are not of such and such a kind, we should not here go with the multitude: e.g. it is right to call 'healthy' whatever tends to produce health, as do most men: but in saying whether the object before us tends to produce health or not, we should adopt the language no longer of the multitude but of the doctor.

3
Moreover, if a term be used in several senses, and it has been laid down that it is or that it is not an attribute of S, you should show your case of one of its several senses, if you cannot show it of both. This rule is to be observed in cases where the difference of meaning is undetected; for supposing this to be obvious, then the other man will object that the point which he himself questioned has not been discussed, but only the other point. This commonplace rule is convertible for purposes both of establishing and of overthrowing a view. For if we want to establish a statement, we shall show that in one sense the attribute belongs, if we cannot show it of both senses: whereas if we are overthrowing a statement, we shall show that in one sense the attribute does not belong, if we cannot show it of both senses. Of course, in overthrowing a statement there is no need to start the discussion by securing any admission, either when the statement asserts or when it denies the attribute universally: for if we show that in any case whatever the attribute does not belong, we shall have demolished the universal assertion of it, and likewise also if we show that it belongs in a single case, we shall demolish the universal denial of it. Whereas in establishing a statement we ought to secure a preliminary admission that if it belongs in any case whatever, it belongs universally, supposing this claim to be a plausible one. For it is not enough to discuss a single instance in order to show that an attribute belongs universally; e.g. to argue that if the soul of man be immortal, then every soul is immortal, so that a previous admission must be secured that if any soul whatever be immortal, then every soul is immortal. This is not to be done in every case, but only whenever we are not easily able to quote any single argument applying to all cases in common, as (e.g.) the geometrician can argue that the triangle has its angles equal to two right angles.
If, again, the variety of meanings of a term be obvious, distinguish how many meanings it has before proceeding either to demolish or to establish it: e.g. supposing 'the right' to mean 'the expedient' or 'the honourable', you should try either to establish or to demolish both descriptions of the subject in question; e.g. by showing that it is honourable and expedient, or that it is neither honourable nor expedient. Supposing, however, that it is impossible to show both, you should show the one, adding an indication that it is true in the one sense and not in the other. The same rule applies also when the number of senses into which it is divided is more than two.
Again, consider those expressions whose meanings are many, but differ not by way of ambiguity of a term, but in some other way: e.g. 'The science of many things is one': here 'many things' may mean the end and the means to that end, as (e.g.) medicine is the science both of producing health and of dieting; or they may be both of them ends, as the science of contraries is said to be the same (for of contraries the one is no more an end than the other); or again they may be an essential and an

accidental attribute, as (e.g.) the essential fact that the triangle has its angles equal to two right angles, and the accidental fact that the equilateral figure has them so: for it is because of the accident of the equilateral triangle happening to be a triangle that we know that it has its angles equal to two right angles. If, then, it is not possible in any sense of the term that the science of many things should be the same, it clearly is altogether impossible that it should be so; or, if it is possible in some sense, then clearly it is possible. Distinguish as many meanings as are required: e.g. if we want to establish a view, we should bring forward all such meanings as admit that view and should divide them only into those meanings which also are required for the establishment of our case: whereas if we want to overthrow a view, we should bring forward all that do not admit that view, and leave the rest aside. We must deal also in these cases as well with any uncertainty about the number of meanings involved. Further, that one thing is, or is not, 'of' another should be established by means of the same commonplace rules; e.g. that a particular science is of a particular thing, treated either as an end or as a means to its end, or as accidentally connected with it; or again that it is not 'of' it in any of the aforesaid ways. The same rule holds true also of desire and all other terms that have more than one object. For the 'desire of X' may mean the desire of it as an end (e.g. the desire of health) or as a means to an end (e.g. the desire of being doctored), or as a thing desired accidentally, as, in the case of wine, the sweet-toothed person desires it not because it is wine but because it is sweet. For essentially he desires the sweet, and only accidentally the wine: for if it be dry, he no longer desires it. His desire for it is therefore accidental. This rule is useful in dealing with relative terms: for cases of this kind are generally cases of relative terms.

4

Moreover, it is well to alter a term into one more familiar, e.g. to substitute 'clear' for 'exact' in describing a conception, and 'being fussy' for 'being busy': for when the expression is made more familiar, the thesis becomes easier to attack. This commonplace rule also is available for both purposes alike, both for establishing and for overthrowing a view.

In order to show that contrary attributes belong to the same thing, look at its genus; e.g. if we want to show that rightness and wrongness are possible in regard to perception, and to perceive is to judge, while it is possible to judge rightly or wrongly, then in regard to perception as well rightness and wrongness must be possible. In the present instance the proof proceeds from the genus and relates to the species: for 'to judge' is the genus of 'to perceive'; for the man who perceives judges in a certain way. But per contra it may proceed from the species to the genus: for all the attributes that belong to the species belong to the genus as well; e.g. if there is a bad and a good knowledge there is also a bad and a good disposition: for 'disposition' is the genus of knowledge. Now the former commonplace argument is fallacious for purposes of establishing a view, while the second is true. For there is no necessity that all the attributes that belong to the genus should belong also to the species; for 'animal' is flying and quadruped, but not so 'man'. All the attributes, on the other hand, that belong to the species must of necessity belong also to the genus; for if 'man' is good, then animal also is good. On the other hand, for purposes of overthrowing a view, the former argument is true while the latter is fallacious; for all the attributes which do not belong to the genus do not belong to the species either; whereas all those that are wanting to the species are not of necessity wanting to the genus.

Since those things of which the genus is predicated must also of necessity have one of its species predicated of them, and since those things that are possessed of the genus in question, or are described by terms derived from that genus, must also of necessity be possessed of one of its species or be described by terms derived from one of its species (e.g. if to anything the term

‘scientific knowledge’ be applied, then also there will be applied to it the term ‘grammatical’ or ‘musical’ knowledge, or knowledge of one of the other sciences; and if any one possesses scientific knowledge or is described by a term derived from ‘science’, then he will also possess grammatical or musical knowledge or knowledge of one of the other sciences, or will be described by a term derived from one of them, e.g. as a ‘grammarian’ or a ‘musician’) – therefore if any expression be asserted that is in any way derived from the genus (e.g. that the soul is in motion), look and see whether it be possible for the soul to be moved with any of the species of motion; whether (e.g.) it can grow or be destroyed or come to be, and so forth with all the other species of motion. For if it be not moved in any of these ways, clearly it does not move at all. This commonplace rule is common for both purposes, both for overthrowing and for establishing a view: for if the soul moves with one of the species of motion, clearly it does move; while if it does not move with any of the species of motion, clearly it does not move.

If you are not well equipped with an argument against the assertion, look among the definitions, real or apparent, of the thing before you, and if one is not enough, draw upon several. For it will be easier to attack people when committed to a definition: for an attack is always more easily made on definitions.

Moreover, look and see in regard to the thing in question, what it is whose reality conditions the reality of the thing in question, or what it is whose reality necessarily follows if the thing in question be real: if you wish to establish a view inquire what there is on whose reality the reality of the thing in question will follow (for if the former be shown to be real, then the thing in question will also have been shown to be real); while if you want to overthrow a view, ask what it is that is real if the thing in question be real, for if we show that what follows from the thing in question is unreal, we shall have demolished the thing in question.

Moreover, look at the time involved, to see if there be any discrepancy anywhere: e.g. suppose a man to have stated that what is being nourished of necessity grows: for animals are always of necessity being nourished, but they do not always grow. Likewise, also, if he has said that knowing is remembering: for the one is concerned with past time, whereas the other has to do also with the present and the future. For we are said to know things present and future (e.g. that there will be an eclipse), whereas it is impossible to remember anything save what is in the past.

5

Moreover, there is the sophistic turn of argument, whereby we draw our opponent into the kind of statement against which we shall be well supplied with lines of argument. This process is sometimes a real necessity, sometimes an apparent necessity, sometimes neither an apparent nor a real necessity. It is really necessary whenever the answerer has denied any view that would be useful in attacking the thesis, and the questioner thereupon addresses his arguments to the support of this view, and when moreover the view in question happens to be one of a kind on which he has a good stock of lines of argument. Likewise, also, it is really necessary whenever he (the questioner) first, by an induction made by means of the view laid down, arrives at a certain statement and then tries to demolish that statement: for when once this has been demolished, the view originally laid down is demolished as well. It is an apparent necessity, when the point to which the discussion comes to be directed appears to be useful, and relevant to the thesis, without being really so; whether it be that the man who is standing up to the argument has refused to concede something, or whether he (the questioner) has first reached it by a plausible induction based upon the thesis and then tries to demolish it. The remaining case is when the point to which the discussion comes to be directed is neither really nor apparently necessary, and it is the

answerer's luck to be confuted on a mere side issue You should beware of the last of the aforesaid methods; for it appears to be wholly disconnected from, and foreign to, the art of dialectic. For this reason, moreover, the answerer should not lose his temper, but assent to those statements that are of no use in attacking the thesis, adding an indication whenever he assents although he does not agree with the view. For, as a rule, it increases the confusion of questioners if, after all propositions of this kind have been granted them, they can then draw no conclusion.

Moreover, any one who has made any statement whatever has in a certain sense made several statements, inasmuch as each statement has a number of necessary consequences: e.g. the man who said 'X is a man' has also said that it is an animal and that it is animate and a biped and capable of acquiring reason and knowledge, so that by the demolition of any single one of these consequences, of whatever kind, the original statement is demolished as well. But you should beware here too of making a change to a more difficult subject: for sometimes the consequence, and sometimes the original thesis, is the easier to demolish.

6

In regard to subjects which must have one and one only of two predicates, as (e.g.) a man must have either a disease or health, supposing we are well supplied as regards the one for arguing its presence or absence, we shall be well equipped as regards the remaining one as well. This rule is convertible for both purposes: for when we have shown that the one attribute belongs, we shall have shown that the remaining one does not belong; while if we show that the one does not belong, we shall have shown that the remaining one does belong. Clearly then the rule is useful for both purposes.

Moreover, you may devise a line of attack by reinterpreting a term in its literal meaning, with the implication that it is most fitting so to take it rather than in its established meaning: e.g. the expression 'strong at heart' will suggest not the courageous man, according to the use now established, but the man the state of whose heart is strong; just as also the expression 'of a good hope' may be taken to mean the man who hopes for good things. Likewise also 'well-starred' may be taken to mean the man whose star is good, as Xenocrates says 'well-starred is he who has a noble soul'.' For a man's star is his soul.

Some things occur of necessity, others usually, others however it may chance; if therefore a necessary event has been asserted to occur usually, or if a usual event (or, failing such an event itself, its contrary) has been stated to occur of necessity, it always gives an opportunity for attack. For if a necessary event has been asserted to occur usually, clearly the speaker has denied an attribute to be universal which is universal, and so has made a mistake: and so he has if he has declared the usual attribute to be necessary: for then he declares it to belong universally when it does not so belong. Likewise also if he has declared the contrary of what is usual to be necessary. For the contrary of a usual attribute is always a comparatively rare attribute: e.g. if men are usually bad, they are comparatively seldom good, so that his mistake is even worse if he has declared them to be good of necessity. The same is true also if he has declared a mere matter of chance to happen of necessity or usually; for a chance event happens neither of necessity nor usually. If the thing happens usually, then even supposing his statement does not distinguish whether he meant that it happens usually or that it happens necessarily, it is open to you to discuss it on the assumption that he meant that it happens necessarily: e.g. if he has stated without any distinction that disinherited persons are bad, you may assume in discussing it that he means that they are so necessarily.

Moreover, look and see also if he has stated a thing to be an accident of itself, taking it to be a different thing because it has a different name, as Prodicus used to divide pleasures into joy and

delight and good cheer: for all these are names of the same thing, to wit, Pleasure. If then any one says that joyfulness is an accidental attribute of cheerfulness, he would be declaring it to be an accidental attribute of itself.

7

Inasmuch as contraries can be conjoined with each other in six ways, and four of these conjunctions constitute a contrariety, we must grasp the subject of contraries, in order that it may help us both in demolishing and in establishing a view. Well then, that the modes of conjunction are six is clear: for either (1) each of the contrary verbs will be conjoined to each of the contrary objects; and this gives two modes: e.g. to do good to friends and to do evil to enemies, or per contra to do evil to friends and to do good to enemies. Or else (2) both verbs may be attached to one object; and this too gives two modes, e.g. to do good to friends and to do evil to friends, or to do good to enemies and to do evil to enemies. Or (3) a single verb may be attached to both objects: and this also gives two modes; e.g. to do good to friends and to do good to enemies, or to do evil to friends and evil to enemies.

The first two then of the aforesaid conjunctions do not constitute any contrariety; for the doing of good to friends is not contrary to the doing of evil to enemies: for both courses are desirable and belong to the same disposition. Nor is the doing of evil to friends contrary to the doing of good to enemies: for both of these are objectionable and belong to the same disposition: and one objectionable thing is not generally thought to be the contrary of another, unless the one be an expression denoting an excess, and the other an expression denoting a defect: for an excess is generally thought to belong to the class of objectionable things, and likewise also a defect. But the other four all constitute a contrariety. For to do good to friends is contrary to the doing of evil to friends: for it proceeds from the contrary disposition, and the one is desirable, and the other objectionable. The case is the same also in regard to the other conjunctions: for in each combination the one course is desirable, and the other objectionable, and the one belongs to a reasonable disposition and the other to a bad. Clearly, then, from what has been said, the same course has more than one contrary. For the doing of good to friends has as its contrary both the doing of good to enemies and the doing of evil to friends. Likewise, if we examine them in the same way, we shall find that the contraries of each of the others also are two in number. Select therefore whichever of the two contraries is useful in attacking the thesis.

Moreover, if the accident of a thing have a contrary, see whether it belongs to the subject to which the accident in question has been declared to belong: for if the latter belongs the former could not belong; for it is impossible that contrary predicates should belong at the same time to the same thing.

Or again, look and see if anything has been said about something, of such a kind that if it be true, contrary predicates must necessarily belong to the thing: e.g. if he has said that the ‘Ideas’ exist in us. For then the result will be that they are both in motion and at rest, and moreover that they are objects both of sensation and of thought. For according to the views of those who posit the existence of Ideas, those Ideas are at rest and are objects of thought; while if they exist in us, it is impossible that they should be unmoved: for when we move, it follows necessarily that all that is in us moves with us as well. Clearly also they are objects of sensation, if they exist in us: for it is through the sensation of sight that we recognize the Form present in each individual.

Again, if there be posited an accident which has a contrary, look and see if that which admits of the accident will admit of its contrary as well: for the same thing admits of contraries. Thus (e.g.) if he has asserted that hatred follows anger, hatred would in that case be in the ‘spirited faculty’: for that

is where anger is. You should therefore look and see if its contrary, to wit, friendship, be also in the 'spirited faculty': for if not – if friendship is in the faculty of desire – then hatred could not follow anger. Likewise also if he has asserted that the faculty of desire is ignorant. For if it were capable of ignorance, it would be capable of knowledge as well: and this is not generally held – I mean that the faculty of desire is capable of knowledge. For purposes, then, of overthrowing a view, as has been said, this rule should be observed: but for purposes of establishing one, though the rule will not help you to assert that the accident actually belongs, it will help you to assert that it may possibly belong. For having shown that the thing in question will not admit of the contrary of the accident asserted, we shall have shown that the accident neither belongs nor can possibly belong; while on the other hand, if we show that the contrary belongs, or that the thing is capable of the contrary, we shall not indeed as yet have shown that the accident asserted does belong as well; our proof will merely have gone to this point, that it is possible for it to belong.

8

Seeing that the modes of opposition are four in number, you should look for arguments among the contradictories of your terms, converting the order of their sequence, both when demolishing and when establishing a view, and you should secure them by means of induction – such arguments (e.g.) as that man be an animal, what is not an animal is not a man': and likewise also in other instances of contradictories. For in those cases the sequence is converse: for 'animal' follows upon 'man but 'not-animal' does not follow upon 'not-man', but conversely 'not-man' upon 'not-animal'. In all cases, therefore, a postulate of this sort should be made, (e.g.) that 'If the honourable is pleasant, what is not pleasant is not honourable, while if the latter be untrue, so is the former'. Likewise, also, 'If what is not pleasant be not honourable, then what is honourable is pleasant'. Clearly, then, the conversion of the sequence formed by contradiction of the terms of the thesis is a method convertible for both purposes.

Then look also at the case of the contraries of S and P in the thesis, and see if the contrary of the one follows upon the contrary of the other, either directly or conversely, both when you are demolishing and when you are establishing a view: secure arguments of this kind as well by means of induction, so far as may be required. Now the sequence is direct in a case such as that of courage and cowardice: for upon the one of them virtue follows, and vice upon the other; and upon the one it follows that it is desirable, while upon the other it follows that it is objectionable. The sequence, therefore, in the latter case also is direct; for the desirable is the contrary of the objectionable. Likewise also in other cases. The sequence is, on the other hand, converse in such a case as this: Health follows upon vigour, but disease does not follow upon debility; rather debility follows upon disease. In this case, then, clearly the sequence is converse. Converse sequence is, however, rare in the case of contraries; usually the sequence is direct. If, therefore, the contrary of the one term does not follow upon the contrary of the other either directly or conversely, clearly neither does the one term follow upon the other in the statement made: whereas if the one followed the other in the case of the contraries, it must of necessity do so as well in the original statement.

You should look also into cases of the privation or presence of a state in like manner to the case of contraries. Only, in the case of such privations the converse sequence does not occur: the sequence is always bound to be direct: e.g. as sensation follows sight, while absence of sensation follows blindness. For the opposition of sensation to absence of sensation is an opposition of the presence to the privation of a state: for the one of them is a state, and the other the privation of it.

The case of relative terms should also be studied in like manner to that of a state and its privation: for the sequence of these as well is direct; e.g. if 3/1 is a multiple, then 1/3 is a fraction: for 3/1 is

relative to 1/3, and so is a multiple to a fraction. Again, if knowledge be a conceiving, then also the object of knowledge is an object of conception; and if sight be a sensation, then also the object of sight is an object of sensation. An objection may be made that there is no necessity for the sequence to take place, in the case of relative terms, in the way described: for the object of sensation is an object of knowledge, whereas sensation is not knowledge. The objection is, however, not generally received as really true; for many people deny that there is knowledge of objects of sensation. Moreover, the principle stated is just as useful for the contrary purpose, e.g. to show that the object of sensation is not an object of knowledge, on the ground that neither is sensation knowledge.

9

Again look at the case of the co-ordinates and inflected forms of the terms in the thesis, both in demolishing and in establishing it. By co-ordinates' are meant terms such as the following: 'Just deeds' and the 'just man' are coordinates of 'justice', and 'courageous deeds' and the 'courageous man' are co-ordinates of courage. Likewise also things that tend to produce and to preserve anything are called co-ordinates of that which they tend to produce and to preserve, as e.g. 'healthy habits' are co-ordinates of 'health' and a 'vigorous constitutional' of a 'vigorous constitution' and so forth also in other cases. 'Co-ordinate', then, usually describes cases such as these, whereas 'inflected forms' are such as the following: 'justly', 'courageously', 'healthily', and such as are formed in this way. It is usually held that words when used in their inflected forms as well are co-ordinates, as (e.g.) 'justly' in relation to justice, and 'courageously' to courage; and then 'co-ordinate' describes all the members of the same kindred series, e.g. 'justice', 'just', of a man or an act, 'justly'. Clearly, then, when any one member, whatever its kind, of the same kindred series is shown to be good or praiseworthy, then all the rest as well come to be shown to be so: e.g. if 'justice' be something praiseworthy, then so will 'just', of a man or thing, and 'justly' connote something praiseworthy. Then 'justly' will be rendered also 'praiseworthily', derived will by the same inflexion from 'the praiseworthy' whereby 'justly' is derived from 'justice'.

Look not only in the case of the subject mentioned, but also in the case of its contrary, for the contrary predicate: e.g. argue that good is not necessarily pleasant; for neither is evil painful: or that, if the latter be the case, so is the former. Also, if justice be knowledge, then injustice is ignorance: and if 'justly' means 'knowingly' and 'skilfully', then 'unjustly' means 'ignorantly' and 'unskilfully': whereas if the latter be not true, neither is the former, as in the instance given just now: for 'unjustly' is more likely to seem equivalent to 'skilfully' than to 'unskilfully'. This commonplace rule has been stated before in dealing with the sequence of contraries; for all we are claiming now is that the contrary of P shall follow the contrary of S.

Moreover, look at the modes of generation and destruction of a thing, and at the things which tend to produce or to destroy it, both in demolishing and in establishing a view. For those things whose modes of generation rank among good things, are themselves also good; and if they themselves be good, so also are their modes of generation. If, on the other hand, their modes of generation be evil, then they themselves also are evil. In regard to modes of destruction the converse is true: for if the modes of destruction rank as good things, then they themselves rank as evil things; whereas if the modes of destruction count as evil, they themselves count as good. The same argument applies also to things tending to produce and destroy: for things whose productive causes are good, themselves also rank as good; whereas if causes destructive of them are good, they themselves rank as evil.

10

Again, look at things which are like the subject in question, and see if they are in like case; e.g. if one branch of knowledge has more than one object, so also will one opinion; and if to possess sight be to see, then also to possess hearing will be to hear. Likewise also in the case of other things, both those which are and those which are generally held to be like. The rule in question is useful for both purposes; for if it be as stated in the case of some one like thing, it is so with the other like things as well, whereas if it be not so in the case of some one of them, neither is it so in the case of the others. Look and see also whether the cases are alike as regards a single thing and a number of things: for sometimes there is a discrepancy. Thus, if to 'know' a thing be to 'think of' it, then also to 'know many things' is to 'be thinking of many things'; whereas this is not true; for it is possible to know many things but not to be thinking of them. If, then, the latter proposition be not true, neither was the former that dealt with a single thing, viz. that to 'know' a thing is to 'think of' it.

Moreover, argue from greater and less degrees. In regard to greater degrees there are four commonplace rules. One is: See whether a greater degree of the predicate follows a greater degree of the subject: e.g. if pleasure be good, see whether also a greater pleasure be a greater good: and if to do a wrong be evil, see whether also to do a greater wrong is a greater evil. Now this rule is of use for both purposes: for if an increase of the accident follows an increase of the subject, as we have said, clearly the accident belongs; while if it does not follow, the accident does not belong. You should establish this by induction. Another rule is: If one predicate be attributed to two subjects; then supposing it does not belong to the subject to which it is the more likely to belong, neither does it belong where it is less likely to belong; while if it does belong where it is less likely to belong, then it belongs as well where it is more likely. Again: If two predicates be attributed to one subject, then if the one which is more generally thought to belong does not belong, neither does the one that is less generally thought to belong; or, if the one that is less generally thought to belong does belong, so also does the other. Moreover: If two predicates be attributed to two subjects, then if the one which is more usually thought to belong to the one subject does not belong, neither does the remaining predicate belong to the remaining subject; or, if the one which is less usually thought to belong to the one subject does belong, so too does the remaining predicate to the remaining subject. Moreover, you can argue from the fact that an attribute belongs, or is generally supposed to belong, in a like degree, in three ways, viz. those described in the last three rules given in regard to a greater degree.' For supposing that one predicate belongs, or is supposed to belong, to two subjects in a like degree, then if it does not belong to the one, neither does it belong to the other; while if it belongs to the one, it belongs to the remaining one as well. Or, supposing two predicates to belong in a like degree to the same subject, then, if the one does not belong, neither does the remaining one; while if the one does belong, the remaining one belongs as well. The case is the same also if two predicates belong in a like degree to two subjects; for if the one predicate does not belong to the one subject, neither does the remaining predicate belong to the remaining subject, while if the one predicate does belong to the one subject, the remaining predicate belongs to the remaining subject as well.

11

You can argue, then, from greater or less or like degrees of truth in the aforesaid number of ways. Moreover, you should argue from the addition of one thing to another. If the addition of one thing to another makes that other good or white, whereas formerly it was not white or good, then the thing added will be white or good – it will possess the character it imparts to the whole as well. Moreover, if an addition of something to a given object intensifies the character which it had as

given, then the thing added will itself as well be of that character. Likewise, also, in the case of other attributes. The rule is not applicable in all cases, but only in those in which the excess described as an ‘increased intensity’ is found to take place. The above rule is, however, not convertible for overthrowing a view. For if the thing added does not make the other good, it is not thereby made clear whether in itself it may not be good: for the addition of good to evil does not necessarily make the whole good, any more than the addition of white to black makes the whole white.

Again, any predicate of which we can speak of greater or less degrees belongs also absolutely: for greater or less degrees of good or of white will not be attributed to what is not good or white: for a bad thing will never be said to have a greater or less degree of goodness than another, but always of badness. This rule is not convertible, either, for the purpose of overthrowing a predication: for several predicates of which we cannot speak of a greater degree belong absolutely: for the term ‘man’ is not attributed in greater and less degrees, but a man is a man for all that.

You should examine in the same way predicates attributed in a given respect, and at a given time and place: for if the predicate be possible in some respect, it is possible also absolutely. Likewise, also, is what is predicated at a given time or place: for what is absolutely impossible is not possible either in any respect or at any place or time. An objection may be raised that in a given respect people may be good by nature, e.g. they may be generous or temperately inclined, while absolutely they are not good by nature, because no one is prudent by nature. Likewise, also, it is possible for a destructible thing to escape destruction at a given time, whereas it is not possible for it to escape absolutely. In the same way also it is a good thing at certain places to follow see and such a diet, e.g. in infected areas, though it is not a good thing absolutely. Moreover, in certain places it is possible to live singly and alone, but absolutely it is not possible to exist singly and alone. In the same way also it is in certain places honourable to sacrifice one’s father, e.g. among the Triballi, whereas, absolutely, it is not honourable. Or possibly this may indicate a relativity not to places but to persons: for it is all the same wherever they may be: for everywhere it will be held honourable among the Triballi themselves, just because they are Triballi. Again, at certain times it is a good thing to take medicines, e.g. when one is ill, but it is not so absolutely. Or possibly this again may indicate a relativity not to a certain time, but to a certain state of health: for it is all the same whenever it occurs, if only one be in that state. A thing is ‘absolutely’ so which without any addition you are prepared to say is honourable or the contrary. Thus (e.g.) you will deny that to sacrifice one’s father is honourable: it is honourable only to certain persons: it is not therefore honourable absolutely. On the other hand, to honour the gods you will declare to be honourable without adding anything, because that is honourable absolutely. So that whatever without any addition is generally accounted to be honourable or dishonourable or anything else of that kind, will be said to be so ‘absolutely’.

Book III

1

The question which is the more desirable, or the better, of two or more things, should be examined upon the following lines: only first of all it must be clearly laid down that the inquiry we are making concerns not things that are widely divergent and that exhibit great differences from one another (for nobody raises any doubt whether happiness or wealth is more desirable), but things that are

nearly related and about which we commonly discuss for which of the two we ought rather to vote, because we do not see any advantage on either side as compared with the other. Clearly, in such cases if we can show a single advantage, or more than one, our judgement will record our assent that whichever side happens to have the advantage is the more desirable.

First, then, that which is more lasting or secure is more desirable than that which is less so: and so is that which is more likely to be chosen by the prudent or by the good man or by the right law, or by men who are good in any particular line, when they make their choice as such, or by the experts in regard to any particular class of things; i.e. either whatever most of them or what all of them would choose; e.g. in medicine or in carpentry those things are more desirable which most, or all, doctors would choose; or, in general, whatever most men or all men or all things would choose, e.g. the good: for everything aims at the good. You should direct the argument you intend to employ to whatever purpose you require. Of what is 'better' or 'more desirable' the absolute standard is the verdict of the better science, though relatively to a given individual the standard may be his own particular science.

In the second place, that which is known as 'an x' is more desirable than that which does not come within the genus 'x' – e.g. justice than a just man; for the former falls within the genus 'good', whereas the other does not, and the former is called 'a good', whereas the latter is not: for nothing which does not happen to belong to the genus in question is called by the generic name; e.g. a 'white man' is not 'a colour'. Likewise also in other cases.

Also, that which is desired for itself is more desirable than that which is desired for something else; e.g. health is more desirable than gymnastics: for the former is desired for itself, the latter for something else. Also, that which is desirable in itself is more desirable than what is desirable per accidens; e.g. justice in our friends than justice in our enemies: for the former is desirable in itself, the latter per accidens: for we desire that our enemies should be just per accidens, in order that they may do us no harm. This last principle is the same as the one that precedes it, with, however, a different turn of expression. For we desire justice in our friends for itself, even though it will make no difference to us, and even though they be in India; whereas in our enemies we desire it for something else, in order that they may do us no harm.

Also, that which is in itself the cause of good is more desirable than what is so per accidens, e.g. virtue than luck (for the former in itself, and the latter per accidens, the cause of good things), and so in other cases of the same kind. Likewise also in the case of the contrary; for what is in itself the cause of evil is more objectionable than what is so per accidens, e.g. vice and chance: for the one is bad in itself, whereas chance is so per accidens.

Also, what is good absolutely is more desirable than what is good for a particular person, e.g. recovery of health than a surgical operation; for the former is good absolutely, the latter only for a particular person, viz. the man who needs an operation. So too what is good by nature is more desirable than the good that is not so by nature, e.g. justice than the just man; for the one is good by nature, whereas in the other case the goodness is acquired. Also the attribute is more desirable which belongs to the better and more honourable subject, e.g. to a god rather than to a man, and to the soul rather than to the body. So too the property of the better thing is better than the property of the worse; e.g. the property of God than the property of man: for whereas in respect of what is common in both of them they do not differ at all from each other, in respect of their properties the one surpasses the other. Also that is better which is inherent in things better or prior or more honourable: thus (e.g.) health is better than strength and beauty: for the former is inherent in the moist and the dry, and the hot and the cold, in fact in all the primary constituents of an animal, whereas the others are inherent in what is secondary, strength being a feature of the sinews and bones, while beauty is generally supposed to consist in a certain symmetry of the limbs. Also the

end is generally supposed to be more desirable than the means, and of two means, that which lies nearer the end. In general, too, a means directed towards the end of life is more desirable than a means to anything else, e.g. that which contributes to happiness than that which contributes to prudence. Also the competent is more desirable than the incompetent. Moreover, of two productive agents that one is more desirable whose end is better; while between a productive agent and an end we can decide by a proportional sum whenever the excess of the one end over the other is greater than that of the latter over its own productive means: e.g. supposing the excess of happiness over health to be greater than that of health over what produces health, then what produces happiness is better than health. For what produces happiness exceeds what produces health just as much as happiness exceeds health. But health exceeds what produces health by a smaller amount; ergo, the excess of what produces happiness over what produces health is greater than that of health over what produces health. Clearly, therefore, what produces happiness is more desirable than health: for it exceeds the same standard by a greater amount. Moreover, what is in itself nobler and more precious and praiseworthy is more desirable than what is less so, e.g. friendship than wealth, and justice than strength. For the former belong in themselves to the class of things precious and praiseworthy, while the latter do so not in themselves but for something else: for no one prizes wealth for itself but always for something else, whereas we prize friendship for itself, even though nothing else is likely to come to us from it.

2

Moreover, whenever two things are very much like one another, and we cannot see any superiority in the one over the other of them, we should look at them from the standpoint of their consequences. For the one which is followed by the greater good is the more desirable: or, if the consequences be evil, that is more desirable which is followed by the less evil. For though both may be desirable, yet there may possibly be some unpleasant consequence involved to turn the scale. Our survey from the point of view of consequences lies in two directions, for there are prior consequences and later consequences: e.g. if a man learns, it follows that he was ignorant before and knows afterwards. As a rule, the later consequence is the better to consider. You should take, therefore, whichever of the consequences suits your purpose.

Moreover, a greater number of good things is more desirable than a smaller, either absolutely or when the one is included in the other, viz. the smaller number in the greater. An objection may be raised suppose in some particular case the one is valued for the sake of the other; for then the two together are not more desirable than the one; e.g. recovery of health and health, than health alone, inasmuch as we desire recovery of health for the sake of health. Also it is quite possible for what is not good, together with what is, to be more desirable than a greater number of good things, e.g. the combination of happiness and something else which is not good may be more desirable than the combination of justice and courage. Also, the same things are more valuable if accompanied than if unaccompanied by pleasure, and likewise when free from pain than when attended with pain.

Also, everything is more desirable at the season when it is of greater consequence; e.g. freedom from pain in old age more than in youth: for it is of greater consequence in old age. On the same principle also, prudence is more desirable in old age; for no man chooses the young to guide him, because he does not expect them to be prudent. With courage, the converse is the case, for it is in youth that the active exercise of courage is more imperatively required. Likewise also with temperance; for the young are more troubled by their passions than are their elders.

Also, that is more desirable which is more useful at every season or at most seasons, e.g. justice and temperance rather than courage: for they are always useful, while courage is only useful at times.

Also, that one of two things which if all possess, we do not need the other thing, is more desirable than that which all may possess and still we want the other one as well. Take the case of justice and courage; if everybody were just, there would be no use for courage, whereas all might be courageous, and still justice would be of use.

Moreover, judge by the destructions and losses and generations and acquisitions and contraries of things: for things whose destruction is more objectionable are themselves more desirable. Likewise also with the losses and contraries of things; for a thing whose loss or whose contrary is more objectionable is itself more desirable. With the generations or acquisitions of things the opposite is the case: for things whose acquisition or generation is more desirable are themselves also desirable.

Another commonplace rule is that what is nearer to the good is better and more desirable, i.e. what more nearly resembles the good: thus justice is better than a just man. Also, that which is more like than another thing to something better than itself, as e.g. some say that Ajax was a better man than Odysseus because he was more like Achilles. An objection may be raised to this that it is not true: for it is quite possible that Ajax did not resemble Achilles more nearly than Odysseus in the points which made Achilles the best of them, and that Odysseus was a good man, though unlike Achilles.

Look also to see whether the resemblance be that of a caricature, like the resemblance of a monkey to a man, whereas a horse bears none: for the monkey is not the more handsome creature, despite its nearer resemblance to a man. Again, in the case of two things, if one is more like the better thing while another is more like the worse, then that is likely to be better which is more like the better. This too, however, admits of an objection: for quite possibly the one only slightly resembles the better, while the other strongly resembles the worse, e.g. supposing the resemblance of Ajax to Achilles to be slight, while that of Odysseus to Nestor is strong. Also it may be that the one which is like the better type shows a degrading likeness, whereas the one which is like the worse type improves upon it: witness the likeness of a horse to a donkey, and that of a monkey to a man.

Another rule is that the more conspicuous good is more desirable than the less conspicuous, and the more difficult than the easier: for we appreciate better the possession of things that cannot be easily acquired. Also the more personal possession is more desirable than the more widely shared. Also, that which is more free from connexion with evil: for what is not attended by any unpleasantness is more desirable than what is so attended.

Moreover, if A be without qualification better than B, then also the best of the members of A is better than the best of the members of B; e.g. if Man be better than Horse, then also the best man is better than the best horse. Also, if the best in A be better than the best in B, then also A is better than B without qualification; e.g. if the best man be better than the best horse, then also Man is better than Horse without qualification.

Moreover, things which our friends can share are more desirable than those they cannot. Also, things which we like rather to do to our friend are more desirable than those we like to do to the man in the street, e.g. just dealing and the doing of good rather than the semblance of them: for we would rather really do good to our friends than seem to do so, whereas towards the man in the street the converse is the case.

Also, superfluities are better than necessities, and are sometimes more desirable as well: for the good life is better than mere life, and good life is a superfluity, whereas mere life itself is a necessity. Sometimes, though, what is better is not also more desirable: for there is no necessity that because it is better it should also be more desirable: at least to be a philosopher is better than to make money, but it is not more desirable for a man who lacks the necessities of life. The expression ‘superfluity’ applies whenever a man possesses the necessities of life and sets to work to secure as well other noble acquisitions. Roughly speaking, perhaps, necessities are more desirable, while superfluities are better.

Also, what cannot be got from another is more desirable than what can be got from another as well, as (e.g.) is the case of justice compared with courage. Also, A is more desirable if A is desirable without B, but not B without A: power (e.g.) is not desirable without prudence, but prudence is desirable without power. Also, if of two things we repudiate the one in order to be thought to possess the other, then that one is more desirable which we wish to be thought to possess; thus (e.g.) we repudiate the love of hard work in order that people may think us geniuses.
Moreover, that is more desirable in whose absence it is less blameworthy for people to be vexed; and that is more desirable in whose absence it is more blameworthy for a man not to be vexed.

3
Moreover, of things that belong to the same species one which possesses the peculiar virtue of the species is more desirable than one which does not. If both possess it, then the one which possesses it in a greater degree is more desirable.
Moreover, if one thing makes good whatever it touches, while another does not, the former is more desirable, just as also what makes things warm is warmer than what does not. If both do so, then that one is more desirable which does so in a greater degree, or if it render good the better and more important object – if (e.g.), the one makes good the soul, and the other the body.
Moreover, judge things by their inflexions and uses and actions and works, and judge these by them: for they go with each other: e.g. if ‘justly’ means something more desirable than ‘courageously’, then also justice means something more desirable than courage; and if justice be more desirable than courage, then also ‘justly’ means something more desirable than ‘courageously’. Similarly also in the other cases.
Moreover, if one thing exceeds while the other falls short of the same standard of good, the one which exceeds is the more desirable; or if the one exceeds an even higher standard. Nay more, if there be two things both preferable to something, the one which is more highly preferable to it is more desirable than the less highly preferable. Moreover, when the excess of a thing is more desirable than the excess of something else, that thing is itself also more desirable than the other, as (e.g.) friendship than money: for an excess of friendship is more desirable than an excess of money. So also that of which a man would rather that it were his by his own doing is more desirable than what he would rather get by another’s doing, e.g. friends than money. Moreover, judge by means of an addition, and see if the addition of A to the same thing as B makes the whole more desirable than does the addition of B. You must, however, beware of adducing a case in which the common term uses, or in some other way helps the case of, one of the things added to it, but not the other, as (e.g.) if you took a saw and a sickle in combination with the art of carpentry: for in the combination the saw is a more desirable thing, but it is not a more desirable thing without qualification. Again, a thing is more desirable if, when added to a lesser good, it makes the whole greater good. Likewise, also, you should judge by means of subtraction: for the thing upon whose subtraction the remainder is a lesser good may be taken to be a greater good, whichever it be whose subtraction makes the remainder a lesser good.
Also, if one thing be desirable for itself, and the other for the look of it, the former is more desirable, as (e.g.) health than beauty. A thing is defined as being desired for the look of it if, supposing no one knew of it, you would not care to have it. Also, it is more desirable both for itself and for the look of it, while the other thing is desirable on the one ground alone. Also, whichever is the more precious for itself, is also better and more desirable. A thing may be taken to be more precious in itself which we choose rather for itself, without anything else being likely to come of it.

Moreover, you should distinguish in how many senses ‘desirable’ is used, and with a view to what ends, e.g. expediency or honour or pleasure. For what is useful for all or most of them may be taken to be more desirable than what is not useful in like manner. If the same characters belong to both things you should look and see which possesses them more markedly, i.e. which of the two is the more pleasant or more honourable or more expedient. Again, that is more desirable which serves the better purpose, e.g. that which serves to promote virtue more than that which serves to promote pleasure. Likewise also in the case of objectionable things; for that is more objectionable which stands more in the way of what is desirable, e.g. disease more than ugliness: for disease is a greater hindrance both to pleasure and to being good.
Moreover, argue by showing that the thing in question is in like measure objectionable and desirable: for a thing of such a character that a man might well desire and object to it alike is less desirable than the other which is desirable only.

4
Comparisons of things together should therefore be conducted in the manner prescribed. The same commonplace rules are useful also for showing that anything is simply desirable or objectionable: for we have only to subtract the excess of one thing over another. For if what is more precious be more desirable, then also what is precious is desirable; and if what is more useful be more desirable, then also what is useful is desirable. Likewise, also, in the case of other things which admit of comparisons of that kind. For in some cases in the very course of comparing the things together we at once assert also that each of them, or the one of them, is desirable, e.g. whenever we call the one good ‘by nature’ and the other ‘not by nature’: for dearly what is good by nature is desirable.

5
The commonplace rules relating to comparative degrees and amounts ought to be taken in the most general possible form: for when so taken they are likely to be useful in a larger number of instances. It is possible to render some of the actual rules given above more universal by a slight alteration of the expression, e.g. that what by nature exhibits such and such a quality exhibits that quality in a greater degree than what exhibits it not by nature. Also, if one thing does, and another does not, impart such and such a quality to that which possesses it, or to which it belongs, then whichever does impart it is of that quality in greater degree than the one which does not impart it; and if both impart it, then that one exhibits it in a greater degree which imparts it in a greater degree.
Moreover, if in any character one thing exceeds and another falls short of the same standard; also, if the one exceeds something which exceeds a given standard, while the other does not reach that standard, then clearly the first-named thing exhibits that character in a greater degree. Moreover, you should judge by means of addition, and see if A when added to the same thing as B imparts to the whole such and such a character in a more marked degree than B, or if, when added to a thing which exhibits that character in a less degree, it imparts that character to the whole in a greater degree. Likewise, also, you may judge by means of subtraction: for a thing upon whose subtraction the remainder exhibits such and such a character in a less degree, itself exhibits that character in a greater degree. Also, things exhibit such and such a character in a greater degree if more free from admixture with their contraries; e.g. that is whiter which is more free from admixture with black. Moreover, apart from the rules given above, that has such and such a character in greater degree which admits in a greater degree of the definition proper to the given character; e.g. if the definition

of ‘white’ be ‘a colour which pierces the vision’, then that is whiter which is in a greater degree a colour that pierces the vision.

6

If the question be put in a particular and not in a universal form, in the first place the universal constructive or destructive commonplace rules that have been given may all be brought into use. For in demolishing or establishing a thing universally we also show it in particular: for if it be true of all, it is true also of some, and if untrue of all, it is untrue of some. Especially handy and of general application are the commonplace rules that are drawn from the opposites and co-ordinates and inflexions of a thing: for public opinion grants alike the claim that if all pleasure be good, then also all pain is evil, and the claim that if some pleasure be good, then also some pain is evil. Moreover, if some form of sensation be not a capacity, then also some form of failure of sensation is not a failure of capacity. Also, if the object of conception is in some cases an object of knowledge, then also some form of conceiving is knowledge. Again, if what is unjust be in some cases good, then also what is just is in some cases evil; and if what happens justly is in some cases evil, then also what happens unjustly is in some cases good. Also, if what is pleasant is in some cases objectionable, then pleasure is in some cases an objectionable thing. On the same principle, also, if what is pleasant is in some cases beneficial, then pleasure is in some cases a beneficial thing. The case is the same also as regards the things that destroy, and the processes of generation and destruction. For if anything that destroys pleasure or knowledge be in some cases good, then we may take it that pleasure or knowledge is in some cases an evil thing. Likewise, also, if the destruction of knowledge be in some cases a good thing or its production an evil thing, then knowledge will be in some cases an evil thing; e.g. if for a man to forget his disgraceful conduct be a good thing, and to remember it be an evil thing, then the knowledge of his disgraceful conduct may be taken to be an evil thing. The same holds also in other cases: in all such cases the premiss and the conclusion are equally likely to be accepted.

Moreover you should judge by means of greater or smaller or like degrees: for if some member of another genus exhibit such and such a character in a more marked degree than your object, while no member of that genus exhibits that character at all, then you may take it that neither does the object in question exhibit it; e.g. if some form of knowledge be good in a greater degree than pleasure, while no form of knowledge is good, then you may take it that pleasure is not good either. Also, you should judge by a smaller or like degree in the same way: for so you will find it possible both to demolish and to establish a view, except that whereas both are possible by means of like degrees, by means of a smaller degree it is possible only to establish, not to overthrow. For if a certain form of capacity be good in a like degree to knowledge, and a certain form of capacity be good, then so also is knowledge; while if no form of capacity be good, then neither is knowledge. If, too, a certain form of capacity be good in a less degree than knowledge, and a certain form of capacity be good, then so also is knowledge; but if no form of capacity be good, there is no necessity that no form of knowledge either should be good. Clearly, then, it is only possible to establish a view by means of a less degree.

Not only by means of another genus can you overthrow a view, but also by means of the same, if you take the most marked instance of the character in question; e.g. if it be maintained that some form of knowledge is good, then, suppose it to be shown that prudence is not good, neither will any other kind be good, seeing that not even the kind upon which there is most general agreement is so. Moreover, you should go to work by means of an hypothesis; you should claim that the attribute, if it belongs or does not belong in one case, does so in a like degree in all, e.g. that if the soul of man

be immortal, so are other souls as well, while if this one be not so, neither are the others. If, then, it be maintained that in some instance the attribute belongs, you must show that in some instance it does not belong: for then it will follow, by reason of the hypothesis, that it does not belong to any instance at all. If, on the other hand, it be maintained that it does not belong in some instance, you must show that it does belong in some instance, for in this way it will follow that it belongs to all instances. It is clear that the maker of the hypothesis universalizes the question, whereas it was stated in a particular form: for he claims that the maker of a particular admission should make a universal admission, inasmuch as he claims that if the attribute belongs in one instance, it belongs also in all instances alike.

If the problem be indefinite, it is possible to overthrow a statement in only one way; e.g. if a man has asserted that pleasure is good or is not good, without any further definition. For if he meant that a particular pleasure is good, you must show universally that no pleasure is good, if the proposition in question is to be demolished. And likewise, also, if he meant that some particular pleasure is not good you must show universally that all pleasure is good: it is impossible to demolish it in any other way. For if we show that some particular pleasure is not good or is good, the proposition in question is not yet demolished. It is clear, then, that it is possible to demolish an indefinite statement in one way only, whereas it can be established in two ways: for whether we show universally that all pleasure is good, or whether we show that a particular pleasure is good, the proposition in question will have been proved. Likewise, also, supposing we are required to argue that some particular pleasure is not good, if we show that no pleasure is good or that a particular pleasure is not good, we shall have produced an argument in both ways, both universally and in particular, to show that some particular pleasure is not good. If, on the other hand, the statement made be definite, it will be possible to demolish it in two ways; e.g. if it be maintained that it is an attribute of some particular pleasure to be good, while of some it is not: for whether it be shown that all pleasure, or that no pleasure, is good, the proposition in question will have been demolished. If, however, he has stated that only one single pleasure is good, it is possible to demolish it in three ways: for by showing that all pleasure, or that no pleasure, or that more than one pleasure, is good, we shall have demolished the statement in question. If the statement be made still more definite, e.g. that prudence alone of the virtues is knowledge, there are four ways of demolishing it: for if it be shown that all virtue is knowledge, or that no virtue is so, or that some other virtue (e.g. justice) is so, or that prudence itself is not knowledge, the proposition in question will have been demolished.

It is useful also to take a look at individual instances, in cases where some attribute has been said to belong or not to belong, as in the case of universal questions. Moreover, you should take a glance among genera, dividing them by their species until you come to those that are not further divisible, as has been said before:' for whether the attribute is found to belong in all cases or in none, you should, after adducing several instances, claim that he should either admit your point universally, or else bring an objection showing in what case it does not hold. Moreover, in cases where it is possible to make the accident definite either specifically or numerically, you should look and see whether perhaps none of them belongs, showing e.g. that time is not moved, nor yet a movement, by enumerating how many species there are of movement: for if none of these belong to time, clearly it does not move, nor yet is a movement. Likewise, also, you can show that the soul is not a number, by dividing all numbers into either odd or even: for then, if the soul be neither odd nor even, clearly it is not a number.

In regard then to Accident, you should set to work by means like these, and in this manner.

Book IV

1

Next we must go on to examine questions relating to Genus and Property. These are elements in the questions that relate to definitions, but dialecticians seldom address their inquiries to these by themselves. If, then, a genus be suggested for something that is, first take a look at all objects which belong to the same genus as the thing mentioned, and see whether the genus suggested is not predicated of one of them, as happens in the case of an accident: e.g. if ‘good’ be laid down to be the genus of ‘pleasure’, see whether some particular pleasure be not good: for, if so, clearly good’ is not the genus of pleasure: for the genus is predicated of all the members of the same species. Secondly, see whether it be predicated not in the category of essence, but as an accident, as ‘white’ is predicated of ‘snow’, or ‘self-moved’ of the soul. For ‘snow’ is not a kind of ‘white’, and therefore ‘white’ is not the genus of snow, nor is the soul a kind of ‘moving object’: its motion is an accident of it, as it often is of an animal to walk or to be walking. Moreover, ‘moving’ does not seem to indicate the essence, but rather a state of doing or of having something done to it. Likewise, also, ‘white’: for it indicates not the essence of snow, but a certain quality of it. So that neither of them is predicated in the category of ‘essence’.

Especially you should take a look at the definition of Accident, and see whether it fits the genus mentioned, as (e.g.) is also the case in the instances just given. For it is possible for a thing to be and not to be self-moved, and likewise, also, for it to be and not to be white. So that neither of these attributes is the genus but an accident, since we were saying that an accident is an attribute which can belong to a thing and also not belong.

Moreover, see whether the genus and the species be not found in the same division, but the one be a substance while the other is a quality, or the one be a relative while the other is a quality, as (e.g.) ‘slow’ and ‘swan’ are each a substance, while ‘white’ is not a substance but a quality, so that ‘white’ is not the genus either of ‘snow’ or of ‘swan’. Again, knowledge’ is a relative, while ‘good’ and ‘noble’ are each a quality, so that good, or noble, is not the genus of knowledge. For the genera of relatives ought themselves also to be relatives, as is the case with ‘double’: for multiple’, which is the genus of ‘double’, is itself also a relative. To speak generally, the genus ought to fall under the same division as the species: for if the species be a substance, so too should be the genus, and if the species be a quality, so too the genus should be a quality; e.g. if white be a quality, so too should colour be. Likewise, also, in other cases.

Again, see whether it be necessary or possible for the genus to partake of the object which has been placed in the genus. ‘To partake’ is defined as ‘to admit the definition of that which is partaken. Clearly, therefore, the species partake of the genera, but not the genera of the species: for the species admits the definition of the genus, whereas the genus does not admit that of the species. You must look, therefore, and see whether the genus rendered partakes or can possibly partake of the species, e.g. if any one were to render anything as genus of ‘being’ or of ‘unity’: for then the result will be that the genus partakes of the species: for of everything that is, ‘being’ and ‘unity’ are predicated, and therefore their definition as well.

Moreover, see if there be anything of which the species rendered is true, while the genus is not so, e.g. supposing ‘being’ or ‘object of knowledge’ were stated to be the genus of ‘object of opinion’. For ‘object of opinion’ will be a predicate of what does not exist; for many things which do not exist are objects of opinion; whereas that ‘being’ or ‘object of knowledge’ is not predicated of what does not exist is clear. So that neither ‘being’ nor ‘object of knowledge’ is the genus of ‘object of

opinion': for of the objects of which the species is predicated, the genus ought to be predicated as well.

Again, see whether the object placed in the genus be quite unable to partake of any of its species: for it is impossible that it should partake of the genus if it do not partake of any of its species, except it be one of the species reached by the first division: these do partake of the genus alone. If, therefore, 'Motion' be stated as the genus of pleasure, you should look and see if pleasure be neither locomotion nor alteration, nor any of the rest of the given modes of motion: for clearly you may then take it that it does not partake of any of the species, and therefore not of the genus either, since what partakes of the genus must necessarily partake of one of the species as well: so that pleasure could not be a species of Motion, nor yet be one of the individual phenomena comprised under the term 'motion'. For individuals as well partake in the genus and the species, as (e.g.) an individual man partakes of both 'man' and 'animal'.

Moreover, see if the term placed in the genus has a wider denotation than the genus, as (e.g.) 'object of opinion' has, as compared with 'being': for both what is and what is not are objects of opinion, so that 'object of opinion' could not be a species of being: for the genus is always of wider denotation than the species. Again, see if the species and its genus have an equal denotation; suppose, for instance, that of the attributes which go with everything, one were to be stated as a species and the other as its genus, as for example Being and Unity: for everything has being and unity, so that neither is the genus of the other, since their denotation is equal. Likewise, also, if the 'first' of a series and the 'beginning' were to be placed one under the other: for the beginning is first and the first is the beginning, so that either both expressions are identical or at any rate neither is the genus of the other. The elementary principle in regard to all such cases is that the genus has a wider denotation than the species and its differentia: for the differentia as well has a narrower denotation than the genus.

See also whether the genus mentioned fails, or might be generally thought to fail, to apply to some object which is not specifically different from the thing in question; or, if your argument be constructive, whether it does so apply. For all things that are not specifically different have the same genus. If, therefore, it be shown to apply to one, then clearly it applies to all, and if it fails to apply to one, clearly it fails to apply to any; e.g. if any one who assumes 'indivisible lines' were to say that the 'indivisible' is their genus. For the aforesaid term is not the genus of divisible lines, and these do not differ as regards their species from indivisible: for straight lines are never different from each other as regards their species.

2

Look and see, also, if there be any other genus of the given species which neither embraces the genus rendered nor yet falls under it, e.g. suppose any one were to lay down that 'knowledge' is the genus of justice. For virtue is its genus as well, and neither of these genera embraces the remaining one, so that knowledge could not be the genus of justice: for it is generally accepted that whenever one species falls under two genera, the one is embraced by the other. Yet a principle of this kind gives rise to a difficulty in some cases. For some people hold that prudence is both virtue and knowledge, and that neither of its genera is embraced by the other: although certainly not everybody admits that prudence is knowledge. If, however, any one were to admit the truth of this assertion, yet it would still be generally agreed to be necessary that the genera of the same object must at any rate be subordinate either the one to the other or both to the same, as actually is the case with virtue and knowledge. For both fall under the same genus; for each of them is a state and a disposition. You should look, therefore, and see whether neither of these things is true of the genus

rendered; for if the genera be subordinate neither the one to the other nor both to the same, then what is rendered could not be the true genus.

Look, also, at the genus of the genus rendered, and so continually at the next higher genus, and see whether all are predicated of the species, and predicated in the category of essence: for all the higher genera should be predicated of the species in the category of essence. If, then, there be anywhere a discrepancy, clearly what is rendered is not the true genus. [Again, see whether either the genus itself, or one of its higher genera, partakes of the species: for the higher genus does not partake of any of the lower.] If, then, you are overthrowing a view, follow the rule as given: if establishing one, then – suppose that what has been named as genus be admitted to belong to the species, only it be disputed whether it belongs as genus – it is enough to show that one of its higher genera is predicated of the species in the category of essence. For if one of them be predicated in the category of essence, all of them, both higher and lower than this one, if predicated at all of the species, will be predicated of it in the category of essence: so that what has been rendered as genus is also predicated in the category of essence. The premiss that when one genus is predicated in the category of essence, all the rest, if predicated at all, will be predicated in the category of essence, should be secured by induction. Supposing, however, that it be disputed whether what has been rendered as genus belongs at all, it is not enough to show that one of the higher genera is predicated of the species in the category of essence: e.g. if any one has rendered 'locomotion' as the genus of walking, it is not enough to show that walking is 'motion' in order to show that it is 'locomotion', seeing that there are other forms of motion as well; but one must show in addition that walking does not partake of any of the species of motion produced by the same division except locomotion. For of necessity what partakes of the genus partakes also of one of the species produced by the first division of the genus. If, therefore, walking does not partake either of increase or decrease or of the other kinds of motion, clearly it would partake of locomotion, so that locomotion would be the genus of walking.

Again, look among the things of which the given species is predicated as genus, and see if what is rendered as its genus be also predicated in the category of essence of the very things of which the species is so predicated, and likewise if all the genera higher than this genus are so predicated as well. For if there be anywhere a discrepancy, clearly what has been rendered is not the true genus: for had it been the genus, then both the genera higher than it, and it itself, would all have been predicated in the category of essence of those objects of which the species too is predicated in the category of essence. If, then, you are overthrowing a view, it is useful to see whether the genus fails to be predicated in the category of essence of those things of which the species too is predicated. If establishing a view, it is useful to see whether it is predicated in the category of essence: for if so, the result will be that the genus and the species will be predicated of the same object in the category of essence, so that the same object falls under two genera: the genera must therefore of necessity be subordinate one to the other, and therefore if it be shown that the one we wish to establish as genus is not subordinate to the species, clearly the species would be subordinate to it, so that you may take it as shown that it is the genus.

Look, also, at the definitions of the genera, and see whether they apply both to the given species and to the objects which partake of the species. For of necessity the definitions of its genera must be predicated of the species and of the objects which partake of the species: if, then, there be anywhere a discrepancy, clearly what has been rendered is not the genus.

Again, see if he has rendered the differentia as the genus, e.g. 'immortal' as the genus of 'God'. For 'immortal' is a differentia of 'living being', seeing that of living beings some are mortal and others immortal. Clearly, then, a bad mistake has been made; for the differentia of a thing is never its

genus. And that this is true is clear: for a thing's differentia never signifies its essence, but rather some quality, as do 'walking' and 'biped'.
Also, see whether he has placed the differentia inside the genus, e.g. by taking 'odd' as a number'. For 'odd' is a differentia of number, not a species. Nor is the differentia generally thought to partake of the genus: for what partakes of the genus is always either a species or an individual, whereas the differentia is neither a species nor an individual. Clearly, therefore, the differentia does not partake of the genus, so that 'odd' too is no species but a differentia, seeing that it does not partake of the genus.
Moreover, see whether he has placed the genus inside the species, e.g. by taking 'contact' to be a 'juncture', or 'mixture' a 'fusion', or, as in Plato's definition,' 'locomotion' to be the same as 'carriage'. For there is no necessity that contact should be juncture: rather, conversely, juncture must be contact: for what is in contact is not always joined, though what is joined is always in contact. Likewise, also, in the remaining instances: for mixture is not always a 'fusion' (for to mix dry things does not fuse them), nor is locomotion always 'carriage'. For walking is not generally thought to be carriage: for 'carriage' is mostly used of things that change one place for another involuntarily, as happens in the case of inanimate things. Clearly, also, the species, in the instances given, has a wider denotation than the genus, whereas it ought to be vice versa. Again, see whether he has placed the differentia inside the species, by taking (e.g.) 'immortal' to be 'a god'. For the result will be that the species has an equal or wider denotation: and this cannot be, for always the differentia has an equal or a wider denotation than the species. Moreover, see whether he has placed the genus inside the differentia, by making 'colour' (e.g.) to be a thing that 'pierces', or 'number' a thing that is 'odd'. Also, see if he has mentioned the genus as differentia: for it is possible for a man to bring forward a statement of this kind as well, e.g. that 'mixture' is the differentia of 'fusion', or that change of place' is the differentia of 'carriage'. All such cases should be examined by means of the same principles: for they depend upon common rules: for the genus should have a wider denotation that its differentia, and also should not partake of its differentia; whereas, if it be rendered in this manner, neither of the aforesaid requirements can be satisfied: for the genus will both have a narrower denotation than its differentia, and will partake of it.
Again, if no differentia belonging to the genus be predicated of the given species, neither will the genus be predicated of it; e.g. of 'soul' neither 'odd' nor 'even' is predicated: neither therefore is 'number'. Moreover, see whether the species is naturally prior and abolishes the genus along with itself: for the contrary is the general view. Moreover, if it be possible for the genus stated, or for its differentia, to be absent from the alleged species, e.g. for 'movement' to be absent from the 'soul', or 'truth and falsehood' from 'opinion', then neither of the terms stated could be its genus or its differentia: for the general view is that the genus and the differentia accompany the species, as long as it exists.

3

Look and see, also, if what is placed in the genus partakes or could possibly partake of any contrary of the genus: for in that case the same thing will at the same time partake of contrary things, seeing that the genus is never absent from it, while it partakes, or can possibly partake, of the contrary genus as well. Moreover, see whether the species shares in any character which it is utterly impossible for any member of the genus to have. Thus (e.g.) if the soul has a share in life, while it is impossible for any number to live, then the soul could not be a species of number.

You should look and see, also, if the species be a homonym of the genus, and employ as your elementary principles those already stated for dealing with homonymity: for the genus and the species are synonymous.
Seeing that of every genus there is more than one species, look and see if it be impossible that there should be another species than the given one belonging to the genus stated: for if there should be none, then clearly what has been stated could not be a genus at all.
Look and see, also, if he has rendered as genus a metaphorical expression, describing (e.g. ‘temperance’ as a ‘harmony’: a ‘harmony’: for a genus is always predicated of its species in its literal sense, whereas ‘harmony’ is predicated of temperance not in a literal sense but metaphorically: for a harmony always consists in notes.
Moreover, if there be any contrary of the species, examine it. The examination may take different forms; first of all see if the contrary as well be found in the same genus as the species, supposing the genus to have no contrary; for contraries ought to be found in the same genus, if there be no contrary to the genus. Supposing, on the other hand, that there is a contrary to the genus, see if the contrary of the species be found in the contrary genus: for of necessity the contrary species must be in the contrary genus, if there be any contrary to the genus. Each of these points is made plain by means of induction. Again, see whether the contrary of the species be not found in any genus at all, but be itself a genus, e.g. ‘good’: for if this be not found in any genus, neither will its contrary be found in any genus, but will itself be a genus, as happens in the case of ‘good’ and ‘evil’: for neither of these is found in a genus, but each of them is a genus. Moreover, see if both genus and species be contrary to something, and one pair of contraries have an intermediary, but not the other. For if the genera have an intermediary, so should their species as well, and if the species have, so should their genera as well, as is the case with (1) virtue and vice and (2) justice and injustice: for each pair has an intermediary. An objection to this is that there is no intermediary between health and disease, although there is one between evil and good. Or see whether, though there be indeed an intermediary between both pairs, i.e. both between the species and between the genera, yet it be not similarly related, but in one case be a mere negation of the extremes, whereas in the other case it is a subject. For the general view is that the relation should be similar in both cases, as it is in the cases of virtue and vice and of justice and injustice: for the intermediaries between both are mere negations. Moreover, whenever the genus has no contrary, look and see not merely whether the contrary of the species be found in the same genus, but the intermediate as well: for the genus containing the extremes contains the intermediates as well, as (e.g.) in the case of white and black: for ‘colour’ is the genus both of these and of all the intermediate colours as well. An objection may be raised that ‘defect’ and ‘excess’ are found in the same genus (for both are in the genus ‘evil’), whereas moderate amount’, the intermediate between them, is found not in ‘evil’ but in ‘good’. Look and see also whether, while the genus has a contrary, the species has none; for if the genus be contrary to anything, so too is the species, as virtue to vice and justice to injustice.
Likewise. also, if one were to look at other instances, one would come to see clearly a fact like this. An objection may be raised in the case of health and disease: for health in general is the contrary of disease, whereas a particular disease, being a species of disease, e.g. fever and ophthalmia and any other particular disease, has no contrary.
If, therefore, you are demolishing a view, there are all these ways in which you should make your examination: for if the aforesaid characters do not belong to it, clearly what has been rendered is not the genus. If, on the other hand, you are establishing a view, there are three ways: in the first place, see whether the contrary of the species be found in the genus stated, suppose the genus have no contrary: for if the contrary be found in it, clearly the species in question is found in it as well. Moreover, see if the intermediate species is found in the genus stated: for whatever genus contains

the intermediate contains the extremes as well. Again, if the genus have a contrary, look and see whether also the contrary species is found in the contrary genus: for if so, clearly also the species in question is found in the genus in question.
Again, consider in the case of the inflexions and the co-ordinates of species and genus, and see whether they follow likewise, both in demolishing and in establishing a view. For whatever attribute belongs or does not belong to one belongs or does not belong at the same time to all; e.g. if justice be a particular form of knowledge, then also 'justly' is 'knowingly' and the just man is a man of knowledge: whereas if any of these things be not so, then neither is any of the rest of them.

4

Again, consider the case of things that bear a like relation to one another. Thus (e.g.) the relation of the pleasant to pleasure is like that of the useful to the good: for in each case the one produces the other. If therefore pleasure be a kind of 'good', then also the pleasant will be a kind of 'useful': for clearly it may be taken to be productive of good, seeing that pleasure is good. In the same way also consider the case of processes of generation and destruction; if (e.g.) to build be to be active, then to have built is to have been active, and if to learn be to recollect, then also to have learnt is to have recollected, and if to be decomposed be to be destroyed, then to have been decomposed is to have been destroyed, and decomposition is a kind of destruction. Consider also in the same way the case of things that generate or destroy, and of the capacities and uses of things; and in general, both in demolishing and in establishing an argument, you should examine things in the light of any resemblance of whatever description, as we were saying in the case of generation and destruction. For if what tends to destroy tends to decompose, then also to be destroyed is to be decomposed: and if what tends to generate tends to produce, then to be generated is to be produced, and generation is production. Likewise, also, in the case of the capacities and uses of things: for if a capacity be a disposition, then also to be capable of something is to be disposed to it, and if the use of anything be an activity, then to use it is to be active, and to have used it is to have been active.
If the opposite of the species be a privation, there are two ways of demolishing an argument, first of all by looking to see if the opposite be found in the genus rendered: for either the privation is to be found absolutely nowhere in the same genus, or at least not in the same ultimate genus: e.g. if the ultimate genus containing sight be sensation, then blindness will not be a sensation. Secondly, if there be a sensation. Secondly, if there be a privation opposed to both genus and species, but the opposite of the species be not found in the opposite of the genus, then neither could the species rendered be in the genus rendered. If, then, you are demolishing a view, you should follow the rule as stated; but if establishing one there is but one way: for if the opposite species be found in the opposite genus, then also the species in question would be found in the genus in question: e.g. if 'blindness' be a form of 'insensibility', then 'sight' is a form of 'sensation'.
Again, look at the negations of the genus and species and convert the order of terms, according to the method described in the case of Accident: e.g. if the pleasant be a kind of good, what is not good is not pleasant. For were this no something not good as well would then be pleasant. That, however, cannot be, for it is impossible, if 'good' be the genus of pleasant, that anything not good should be pleasant: for of things of which the genus is not predicated, none of the species is predicated either. Also, in establishing a view, you should adopt the same method of examination: for if what is not good be not pleasant, then what is pleasant is good, so that 'good' is the genus of 'pleasant'.
If the species be a relative term, see whether the genus be a relative term as well: for if the species be a relative term, so too is the genus, as is the case with 'double' and 'multiple': for each is a

relative term. If, on the other hand, the genus be a relative term, there is no necessity that the species should be so as well: for ‘knowledge’is a relative term, but not so ‘grammar’. Or possibly not even the first statement would be generally considered true: for virtue is a kind of ‘noble’ and a kind of ‘good’ thing, and yet, while ‘virtue’ is a relative term, ‘good’ and ‘noble’ are not relatives but qualities. Again, see whether the species fails to be used in the same relation when called by its own name, and when called by the name of its genus: e.g. if the term ‘double’ be used to mean the double of a ‘half’, then also the term ‘multiple’ ought to be used to mean multiple of a ‘half’. Otherwise ‘multiple’ could not be the genus of ‘double’.

Moreover, see whether the term fail to be used in the same relation both when called by the name of its genus, and also when called by those of all the genera of its genus. For if the double be a multiple of a half, then ‘in excess of ‘will also be used in relation to a ‘half’: and, in general, the double will be called by the names of all the higher genera in relation to a ‘half’. An objection may be raised that there is no necessity for a term to be used in the same relation when called by its own name and when called by that of its genus: for ‘knowledge’ is called knowledge ‘of an object’, whereas it is called a ‘state’ and ‘disposition’ not of an ‘object’ but of the ‘soul’.

Again, see whether the genus and the species be used in the same way in respect of the inflexions they take, e.g. datives and genitives and all the rest. For as the species is used, so should the genus be as well, as in the case of ‘double’ and its higher genera: for we say both ‘double of’ and ‘multiple of’ a thing. Likewise, also, in the case of ‘knowledge’: for both knowledge’ itself and its genera, e.g. ‘disposition’ and ‘state’, are said to be ‘of’ something. An objection may be raised that in some cases it is not so: for we say ‘superior to’ and ‘contrary to’ so and so, whereas ‘other’, which is the genus of these terms, demands not ‘to’ but ‘than’: for the expression is ‘other than’ so and so.

Again, see whether terms used in like case relationships fail to yield a like construction when converted, as do ‘double’ and ‘multiple’. For each of these terms takes a genitive both in itself and in its converted form: for we say both a half of’ and ‘a fraction of’ something. The case is the same also as regards both ‘knowledge’ and ‘conception’: for these take a genitive, and by conversion an ‘object of knowledge’ and an ‘object of conception’ are both alike used with a dative. If, then, in any cases the constructions after conversion be not alike, clearly the one term is not the genus of the other.

Again, see whether the species and the genus fail to be used in relation to an equal number of things: for the general view is that the uses of both are alike and equal in number, as is the case with ‘present’ and ‘grant’. For a present’ is of something or to some one, and also a ‘grant’ is of something and to some one: and ‘grant’ is the genus of ‘present’, for a ‘present’ is a ‘grant that need not be returned’. In some cases, however, the number of relations in which the terms are used happens not to be equal, for while ‘double’ is double of something, we speak of ‘in excess’ or ‘greater’ in something, as well as of or than something: for what is in excess or greater is always in excess in something, as well as in excess of something. Hence the terms in question are not the genera of ‘double’, inasmuch as they are not used in relation to an equal number of things with the species. Or possibly it is not universally true that species and genus are used in relation to an equal number of things.

See, also, if the opposite of the species have the opposite of the genus as its genus, e.g. whether, if ‘multiple’ be the genus of ‘double’, ‘fraction’ be also the genus of ‘half’. For the opposite of the genus should always be the genus of the opposite species. If, then, any one were to assert that knowledge is a kind of sensation, then also the object of knowledge will have to be a kind of object of sensation, whereas it is not: for an object of knowledge is not always an object of sensation: for objects of knowledge include some of the objects of intuition as well. Hence ‘object of sensation’ is

not the genus of ‘object of knowledge’: and if this be so, neither is ‘sensation’ the genus of ‘knowledge’.
Seeing that of relative terms some are of necessity found in, or used of, the things in relation to which they happen at any time to be used (e.g. ‘disposition’ and ‘state’ and ‘balance’; for in nothing else can the aforesaid terms possibly be found except in the things in relation to which they are used), while others need not be found in the things in relation to which they are used at any time, though they still may be (e.g. if the term ‘object of knowledge’ be applied to the soul: for it is quite possible that the knowledge of itself should be possessed by the soul itself, but it is not necessary, for it is possible for this same knowledge to be found in some one else), while for others, again, it is absolutely impossible that they should be found in the things in relation to which they happen at any time to be used (as e.g. that the contrary should be found in the contrary or knowledge in the object of knowledge, unless the object of knowledge happen to be a soul or a man) – you should look, therefore, and see whether he places a term of one kind inside a genus that is not of that kind, e.g. suppose he has said that ‘memory’ is the ‘abiding of knowledge’. For ‘abiding’ is always found in that which abides, and is used of that, so that the abiding of knowledge also will be found in knowledge. Memory, then, is found in knowledge, seeing that it is the abiding of knowledge. But this is impossible, for memory is always found in the soul. The aforesaid commonplace rule is common to the subject of Accident as well: for it is all the same to say that ‘abiding’ is the genus of memory, or to allege that it is an accident of it. For if in any way whatever memory be the abiding of knowledge, the same argument in regard to it will apply.

5
Again, see if he has placed what is a ‘state’ inside the genus ‘activity’, or an activity inside the genus ‘state’, e.g. by defining ‘sensation’ as ‘movement communicated through the body’: for sensation is a ‘state’, whereas movement is an ‘activity’. Likewise, also, if he has said that memory is a ‘state that is retentive of a conception’, for memory is never a state, but rather an activity.
They also make a bad mistake who rank a ‘state’ within the ‘capacity’ that attends it, e.g. by defining ‘good temper’ as the ‘control of anger’, and ‘courage’ and ‘justice’ as ‘control of fears’ and of ‘gains’: for the terms ‘courageous’ and ‘good-tempered’ are applied to a man who is immune from passion, whereas ‘self-controlled’ describes the man who is exposed to passion and not led by it. Quite possibly, indeed, each of the former is attended by a capacity such that, if he were exposed to passion, he would control it and not be led by it: but, for all that, this is not what is meant by being ‘courageous’ in the one case, and ‘good tempered’ in the other; what is meant is an absolute immunity from any passions of that kind at all.
Sometimes, also, people state any kind of attendant feature as the genus, e.g. ‘pain’ as the genus of ‘anger’ and ‘conception’ as that of conviction’. For both of the things in question follow in a certain sense upon the given species, but neither of them is genus to it. For when the angry man feels pain, the pain bas appeared in him earlier than the anger: for his anger is not the cause of his pain, but his pain of his anger, so that anger emphatically is not pain. By the same reasoning, neither is conviction conception: for it is possible to have the same conception even without being convinced of it, whereas this is impossible if conviction be a species of conception: for it is impossible for a thing still to remain the same if it be entirely transferred out of its species, just as neither could the same animal at one time be, and at another not be, a man. If, on the other hand, any one says that a man who has a conception must of necessity be also convinced of it, then ‘conception’ and ‘conviction’ will be used with an equal denotation, so that not even so could the former be the genus of the latter: for the denotation of the genus should be wider.

See, also, whether both naturally come to be anywhere in the same thing: for what contains the species contains the genus as well: e.g. what contains ‘white’ contains ‘colour’ as well, and what contains ‘knowledge of grammar’ contains ‘knowledge’ as well. If, therefore, any one says that ‘shame’ is ‘fear’, or that ‘anger’ is ‘pain’, the result will be that genus and species are not found in the same thing: for shame is found in the ‘reasoning’ faculty, whereas fear is in the ‘spirited’ faculty, and ‘pain’ is found in the faculty of ‘desires’. (for in this pleasure also is found), whereas ‘anger’ is found in the ‘spirited’ faculty. Hence the terms rendered are not the genera, seeing that they do not naturally come to be in the same faculty as the species. Likewise, also, if ‘friendship’ be found in the faculty of desires, you may take it that it is not a form of ‘wishing’: for wishing is always found in the ‘reasoning’ faculty. This commonplace rule is useful also in dealing with Accident: for the accident and that of which it is an accident are both found in the same thing, so that if they do not appear in the same thing, clearly it is not an accident.

Again, see if the species partakes of the genus attributed only in some particular respect: for it is the general view that the genus is not thus imparted only in some particular respect: for a man is not an animal in a particular respect, nor is grammar knowledge in a particular respect only. Likewise also in other instances. Look, therefore, and see if in the case of any of its species the genus be imparted only in a certain respect; e.g. if ‘animal’ has been described as an ‘object of perception’ or of ‘sight’. For an animal is an object of perception or of sight in a particular respect only; for it is in respect of its body that it is perceived and seen, not in respect of its soul, so that – ‘object of sight’ and ‘object of perception’ could not be the genus of ‘animal’.

Sometimes also people place the whole inside the part without detection, defining (e.g.) ‘animal’ as an ‘animate body’; whereas the part is not predicated in any sense of the whole, so that ‘body’ could not be the genus of animal, seeing that it is a part.

See also if he has put anything that is blameworthy or objectionable into the class ‘capacity’ or ‘capable’, e.g. by defining a ‘sophist’ or a ‘slanderer’, or a ‘thief’ as ‘one who is capable of secretly thieving other people’s property’. For none of the aforesaid characters is so called because he is ‘capable’ in one of these respects: for even God and the good man are capable of doing bad things, but that is not their character: for it is always in respect of their choice that bad men are so called. Moreover, a capacity is always a desirable thing: for even the capacities for doing bad things are desirable, and therefore it is we say that even God and the good man possess them; for they are capable (we say) of doing evil. So then ‘capacity’ can never be the genus of anything blameworthy. Else, the result will be that what is blameworthy is sometimes desirable: for there will be a certain form of capacity that is blameworthy.

Also, see if he has put anything that is precious or desirable for its own sake into the class ‘capacity’ or ‘capable’ or ‘productive’ of anything. For capacity, and what is capable or productive of anything, is always desirable for the sake of something else.

Or see if he has put anything that exists in two genera or more into one of them only. For some things it is impossible to place in a single genus, e.g. the ‘cheat’ and the ‘slanderer’: for neither he who has the will without the capacity, nor he who has the capacity without the will, is a slanderer or cheat, but he who has both of them. Hence he must be put not into one genus, but into both the aforesaid genera.

Moreover, people sometimes in converse order render genus as differentia, and differentia as genus, defining (e.g.) astonishment as ‘excess of wonderment’ and conviction as ‘vehemence of conception’. For neither ‘excess’ nor ‘vehemence’ is the genus, but the differentia: for astonishment is usually taken to be an ‘excessive wonderment’, and conviction to be a ‘vehement conception’, so that ‘wonderment’ and ‘conception’ are the genus, while ‘excess’ and ‘vehemence’ are the differentia. Moreover, if any one renders ‘excess’ and ‘vehemence’ as genera, then

inanimate things will be convinced and astonished. For ‘vehemence’ and ‘excess’ of a thing are found in a thing which is thus vehement and in excess. If, therefore, astonishment be excess of wonderment the astonishment will be found in the wonderment, so that ‘wonderment’ will be astonished! Likewise, also, conviction will be found in the conception, if it be ‘vehemence of conception’, so that the conception will be convinced. Moreover, a man who renders an answer in this style will in consequence find himself calling vehemence vehement and excess excessive: for there is such a thing as a vehement conviction: if then conviction be ‘vehemence’, there would be a ‘vehement vehemence’. Likewise, also, there is such a thing as excessive astonishment: if then astonishment be an excess, there would be an ‘excessive excess’. Whereas neither of these things is generally believed, any more than that knowledge is a knower or motion a moving thing.

Sometimes, too, people make the bad mistake of putting an affection into that which is affected, as its genus, e.g. those who say that immortality is everlasting life: for immortality seems to be a certain affection or accidental feature of life. That this saying is true would appear clear if any one were to admit that a man can pass from being mortal and become immortal: for no one will assert that he takes another life, but that a certain accidental feature or affection enters into this one as it is. So then ‘life’ is not the genus of immortality.

Again, see if to an affection he has ascribed as genus the object of which it is an affection, by defining (e.g.) wind as ‘air in motion’. Rather, wind is ‘a movement of air’: for the same air persists both when it is in motion and when it is still. Hence wind is not ‘air’ at all: for then there would also have been wind when the air was not in motion, seeing that the same air which formed the wind persists. Likewise, also, in other cases of the kind. Even, then, if we ought in this instance to admit the point that wind is ‘air in motion’, yet we should accept a definition of the kind, not about all those things of which the genus is not true, but only in cases where the genus rendered is a true predicate. For in some cases, e.g. ‘mud’ or ‘snow’, it is not generally held to be true. For people tell you that snow is ‘frozen water’ and mud is earth mixed with moisture’, whereas snow is not water, nor mud earth, so that neither of the terms rendered could be the genus: for the genus should be true of all its species. Likewise neither is wine ‘fermented water’, as Empedocles speaks of ‘water fermented in wood’;’ for it simply is not water at all.

6

Moreover, see whether the term rendered fail to be the genus of anything at all; for then clearly it also fails to be the genus of the species mentioned. Examine the point by seeing whether the objects that partake of the genus fail to be specifically different from one another, e.g. white objects: for these do not differ specifically from one another, whereas of a genus the species are always different, so that ‘white’ could not be the genus of anything.

Again, see whether he has named as genus or differentia some feature that goes with everything: for the number of attributes that follow everything is comparatively large: thus (e.g.) ‘Being’ and ‘Unity’ are among the number of attributes that follow everything. If, therefore, he has rendered ‘Being’ as a genus, clearly it would be the genus of everything, seeing that it is predicated of everything; for the genus is never predicated of anything except of its species. Hence Unity, inter alia, will be a species of Being. The result, therefore, is that of all things of which the genus is predicated, the species is predicated as well, seeing that Being and Unity are predicates of absolutely everything, whereas the predication of the species ought to be of narrower range. If, on the other hand, he has named as differentia some attribute that follows everything, clearly the denotation of the differentia will be equal to, or wider than, that of the genus. For if the genus, too,

be some attribute that follows everything, the denotation of the differentia will be equal to its denotation, while if the genus do not follow everything, it will be still wider.
Moreover, see if the description ‘inherent in S’ be used of the genus rendered in relation to its species, as it is used of ‘white’ in the case of snow, thus showing clearly that it could not be the genus: for ‘true of S’ is the only description used of the genus in relation to its species. Look and see also if the genus fails to be synonymous with its species. For the genus is always predicated of its species synonymously.
Moreover, beware, whenever both species and genus have a contrary, and he places the better of the contraries inside the worse genus: for the result will be that the remaining species will be found in the remaining genus, seeing that contraries are found in contrary genera, so that the better species will be found in the worse genus and the worse in the better: whereas the usual view is that of the better species the genus too is better. Also see if he has placed the species inside the worse and not inside the better genus, when it is at the same time related in like manner to both, as (e.g.) if he has defined the ‘soul’ as a ‘form of motion’ or ‘a form of moving thing’. For the same soul is usually thought to be a principle alike of rest and of motion, so that, if rest is the better of the two, this is the genus into which the soul should have been put.
Moreover, judge by means of greater and less degrees: if overthrowing a view, see whether the genus admits of a greater degree, whereas neither the species itself does so, nor any term that is called after it: e.g. if virtue admits of a greater degree, so too does justice and the just man: for one man is called ‘more just than another’. If, therefore, the genus rendered admits of a greater degree, whereas neither the species does so itself nor yet any term called after it, then what has been rendered could not be the genus.
Again, if what is more generally, or as generally, thought to be the genus be not so, clearly neither is the genus rendered. The commonplace rule in question is useful especially in cases where the species appears to have several predicates in the category of essence, and where no distinction has been drawn between them, and we cannot say which of them is genus; e.g. both ‘pain’ and the ‘conception of a slight’ are usually thought to be predicates of ‘anger in the category of essence: for the angry man is both in pain and also conceives that he is slighted. The same mode of inquiry may be applied also to the case of the species, by comparing it with some other species: for if the one which is more generally, or as generally, thought to be found in the genus rendered be not found therein, then clearly neither could the species rendered be found therein.
In demolishing a view, therefore, you should follow the rule as stated. In establishing one, on the other hand, the commonplace rule that you should see if both the genus rendered and the species admit of a greater degree will not serve: for even though both admit it, it is still possible for one not to be the genus of the other. For both ‘beautiful’ and ‘white’ admit of a greater degree, and neither is the genus of the other. On the other hand, the comparison of the genera and of the species one with another is of use: e.g. supposing A and B to have a like claim to be genus, then if one be a genus, so also is the other. Likewise, also, if what has less claim be a genus, so also is what has more claim: e.g. if ‘capacity’ have more claim than ‘virtue’ to be the genus of self-control, and virtue be the genus, so also is capacity. The same observations will apply also in the case of the species. For instance, supposing A and B to have a like claim to be a species of the genus in question, then if the one be a species, so also is the other: and if that which is less generally thought to be so be a species, so also is that which is more generally thought to be so.
Moreover, to establish a view, you should look and see if the genus is predicated in the category of essence of those things of which it has been rendered as the genus, supposing the species rendered to be not one single species but several different ones: for then clearly it will be the genus. If, on the other, the species rendered be single, look and see whether the genus be predicated in the category

of essence of other species as well: for then, again, the result will be that it is predicated of several different species.
Since some people think that the differentia, too, is a predicate of the various species in the category of essence, you should distinguish the genus from the differentia by employing the aforesaid elementary principles – (a) that the genus has a wider denotation than the differentia; (b) that in rendering the essence of a thing it is more fitting to state the genus than the differentia: for any one who says that 'man' is an 'animal' shows what man is better than he who describes him as 'walking'; also (c) that the differentia always signifies a quality of the genus, whereas the genus does not do this of the differentia: for he who says 'walking' describes an animal of a certain quality, whereas he who says 'animal' describes an animal of a certain quality, whereas he who says 'animal' does not describe a walking thing of a certain quality.
The differentia, then, should be distinguished from the genus in this manner. Now seeing it is generally held that if what is musical, in being musical, possesses knowledge in some respect, then also 'music' is a particular kind of 'knowledge'; and also that if what walks is moved in walking, then 'walking' is a particular kind of 'movement'; you should therefore examine in the aforesaid manner any genus in which you want to establish the existence of something; e.g. if you wish to prove that 'knowledge' is a form of 'conviction', see whether the knower in knowing is convinced: for then clearly knowledge would be a particular kind of conviction. You should proceed in the same way also in regard to the other cases of this kind.
Moreover, seeing that it is difficult to distinguish whatever always follows along with a thing, and is not convertible with it, from its genus, if A follows B universally, whereas B does not follow A universally – as e.g. 'rest' always follows a 'calm' and 'divisibility' follows 'number', but not conversely (for the divisible is not always a number, nor rest a calm) – you may yourself assume in your treatment of them that the one which always follows is the genus, whenever the other is not convertible with it: if, on the other hand, some one else puts forward the proposition, do not accept it universally. An objection to it is that 'not-being' always follows what is 'coming to be' (for what is coming to be is not) and is not convertible with it (for what is not is not always coming to be), and that still 'not-being' is not the genus of 'coming to be': for 'not-being' has not any species at all. Questions, then, in regard to Genus should be investigated in the ways described.

Book V

1

The question whether the attribute stated is or is not a property, should be examined by the following methods:
Any 'property' rendered is always either essential and permanent or relative and temporary: e.g. it is an 'essential property' of man to be 'by nature a civilized animal': a 'relative property' is one like that of the soul in relation to the body, viz. that the one is fitted to command, and the other to obey: a 'permanent property' is one like the property which belongs to God, of being an 'immortal living being': a 'temporary property' is one like the property which belongs to any particular man of walking in the gymnasium.
[The rendering of a property 'relatively' gives rise either to two problems or to four. For if he at the same time render this property of one thing and deny it of another, only two problems arise, as in the case of a statement that it is a property of a man, in relation to a horse, to be a biped. For one

might try both to show that a man is not a biped, and also that a horse is a biped: in both ways the property would be upset. If on the other hand he render one apiece of two attributes to each of two things, and deny it in each case of the other, there will then be four problems; as in the case of a statement that it is a property of a man in relation to a horse for the former to be a biped and the latter a quadruped. For then it is possible to try to show both that a man is not naturally a biped, and that he is a quadruped, and also that the horse both is a biped, and is not a quadruped. If you show any of these at all, the intended attribute is demolished.]

An 'essential' property is one which is rendered of a thing in comparison with everything else and distinguishes the said thing from everything else, as does 'a mortal living being capable of receiving knowledge' in the case of man. A 'relative' property is one which separates its subject off not from everything else but only from a particular definite thing, as does the property which virtue possesses, in comparison with knowledge, viz. that the former is naturally produced in more than one faculty, whereas the latter is produced in that of reason alone, and in those who have a reasoning faculty. A 'permanent' property is one which is true at every time, and never fails, like being' compounded of soul and body', in the case of a living creature. A 'temporary' property is one which is true at some particular time, and does not of necessity always follow; as, of some particular man, that he walks in the market-place.

To render a property 'relatively' to something else means to state the difference between them as it is found either universally and always, or generally and in most cases: thus a difference that is found universally and always, is one such as man possesses in comparison with a horse, viz. being a biped: for a man is always and in every case a biped, whereas a horse is never a biped at any time. On the other hand, a difference that is found generally and in most cases, is one such as the faculty of reason possesses in comparison with that of desire and spirit, in that the former commands, while the latter obeys: for the reasoning faculty does not always command, but sometimes also is under command, nor is that of desire and spirit always under command, but also on occasion assumes the command, whenever the soul of a man is vicious.

Of 'properties' the most 'arguable' are the essential and permanent and the relative. For a relative property gives rise, as we said before, to several questions: for of necessity the questions arising are either two or four, or that arguments in regard to these are several. An essential and a permanent property you can discuss in relation to many things, or can observe in relation to many periods of time: if essential', discuss it in comparison with many things: for the property ought to belong to its subject in comparison with every single thing that is, so that if the subject be not distinguished by it in comparison with everything else, the property could not have been rendered correctly. So a permanent property you should observe in relation to many periods of time; for if it does not or did not, or is not going to, belong, it will not be a property. On the other hand, about a temporary property we do not inquire further than in regard to the time called 'the present'; and so arguments in regard to it are not many; whereas an arguable' question is one in regard to which it is possible for arguments both numerous and good to arise.

The so-called 'relative' property, then, should be examined by means of the commonplace arguments relating to Accident, to see whether it belongs to the one thing and not to the other: on the other hand, permanent and essential properties should be considered by the following methods.

2

First, see whether the property has or has not been rendered correctly. Of a rendering being incorrect or correct, one test is to see whether the terms in which the property is stated are not or are more intelligible – for destructive purposes, whether they are not so, and for constructive purposes,

whether they are so. Of the terms not being more intelligible, one test is to see whether the property which he renders is altogether more unintelligible than the subject whose property he has stated: for, if so, the property will not have been stated correctly. For the object of getting a property constituted is to be intelligible: the terms therefore in which it is rendered should be more intelligible: for in that case it will be possible to conceive it more adequately, e.g. any one who has stated that it is a property of 'fire' to 'bear a very close resemblance to the soul', uses the term 'soul', which is less intelligible than 'fire' – for we know better what fire is than what soul is –, and therefore a 'very close resemblance to the soul' could not be correctly stated to be a property of fire.
Another test is to see whether the attribution of A (property) to B (subject) fails to be more intelligible. For not only should the property be more intelligible than its subject, but also it should be something whose attribution to the particular subject is a more intelligible attribution. For he who does not know whether it is an attribute of the particular subject at all, will not know either whether it belongs to it alone, so that whichever of these results happens, its character as a property becomes obscure. Thus (e.g.) a man who has stated that it is a property of fire to be 'the primary element wherein the soul is naturally found', has introduced a subject which is less intelligible than 'fire', viz. whether the soul is found in it, and whether it is found there primarily; and therefore to be 'the primary element in which the soul is naturally found' could not be correctly stated to be a property of 'fire'. On the other hand, for constructive purposes, see whether the terms in which the property is stated are more intelligible, and if they are more intelligible in each of the aforesaid ways. For then the property will have been correctly stated in this respect: for of constructive arguments, showing the correctness of a rendering, some will show the correctness merely in this respect, while others will show it without qualification. Thus (e.g.) a man who has said that the 'possession of sensation' is a property of 'animal' has both used more intelligible terms and has rendered the property more intelligible in each of the aforesaid senses; so that to 'possess sensation' would in this respect have been correctly rendered as a property of 'animal'.
Next, for destructive purposes, see whether any of the terms rendered in the property is used in more than one sense, or whether the whole expression too signifies more than one thing. For then the property will not have been correctly stated. Thus (e.g.) seeing that to 'being natural sentient' signifies more than one thing, viz. (1) to possess sensation, (2) to use one's sensation, being naturally sentient' could not be a correct statement of a property of 'animal'. The reason why the term you use, or the whole expression signifying the property, should not bear more than one meaning is this, that an expression bearing more than one meaning makes the object described obscure, because the man who is about to attempt an argument is in doubt which of the various senses the expression bears: and this will not do, for the object of rendering the property is that he may understand. Moreover, in addition to this, it is inevitable that those who render a property after this fashion should be somehow refuted whenever any one addresses his syllogism to that one of the term's several meanings which does not agree. For constructive purposes, on the other hand, see whether both all the terms and also the expression as a whole avoid bearing more than one sense: for then the property will have been correctly stated in this respect. Thus (e.g.) seeing that 'body' does not bear several meanings, nor quickest to move upwards in space', nor yet the whole expression made by putting them together, it would be correct in this respect to say that it is a property of fire to be the 'body quickest to move upwards in space'.
Next, for destructive purposes, see if the term of which he renders the property is used in more than one sense, and no distinction has been drawn as to which of them it is whose property he is stating: for then the property will not have been correctly rendered. The reasons why this is so are quite clear from what has been said above: for the same results are bound to follow. Thus (e.g.) seeing that 'the knowledge of this' signifies many things for it means (1) the possession of knowledge by

it, (2) the use of its knowledge by it, (3) the existence of knowledge about it, (4) the use of knowledge about it – no property of the 'knowledge of this' could be rendered correctly unless he draw a distinction as to which of these it is whose property he is rendering. For constructive purposes, a man should see if the term of which he is rendering the property avoids bearing many senses and is one and simple: for then the property will have been correctly stated in this respect. Thus (e.g.) seeing that 'man' is used in a single sense, 'naturally civilized animal' would be correctly stated as a property of man.

Next, for destructive purposes, see whether the same term has been repeated in the property. For people often do this undetected in rendering 'properties' also, just as they do in their 'definitions' as well: but a property to which this has happened will not have been correctly stated: for the repetition of it confuses the hearer; thus inevitably the meaning becomes obscure, and further, such people are thought to babble. Repetition of the same term is likely to happen in two ways; one is, when a man repeatedly uses the same word, as would happen if any one were to render, as a property of fire, 'the body which is the most rarefied of bodies' (for he has repeated the word 'body'); the second is, if a man replaces words by their definitions, as would happen if any one were to render, as a property of earth, 'the substance which is by its nature most easily of all bodies borne downwards in space', and were then to substitute 'substances of such and such a kind' for the word 'bodies': for 'body' and 'a substance of such and such a kind' mean one and the same thing. For he will have repeated the word 'substance', and accordingly neither of the properties would be correctly stated. For constructive purposes, on the other hand, see whether he avoids ever repeating the same term; for then the property will in this respect have been correctly rendered. Thus (e.g.) seeing that he who has stated 'animal capable of acquiring knowledge' as a property of man has avoided repeating the same term several times, the property would in this respect have been correctly rendered of man.

Next, for destructive purposes, see whether he has rendered in the property any such term as is a universal attribute. For one which does not distinguish its subject from other things is useless, and it is the business of the language Of 'properties', as also of the language of definitions, to distinguish. In the case contemplated, therefore, the property will not have been correctly rendered. Thus (e.g.) a man who has stated that it is a property of knowledge to be a 'conception incontrovertible by argument, because of its unity', has used in the property a term of that kind, viz. 'unity', which is a universal attribute; and therefore the property of knowledge could not have been correctly stated. For constructive purposes, on the other hand, see whether he has avoided all terms that are common to everything and used a term that distinguishes the subject from something: for then the property will in this respect have been correctly stated. Thus (e.g.) inasmuch as he who has said that it is a property of a 'living creature' to 'have a soul' has used no term that is common to everything, it would in this respect have been correctly stated to be a property of a 'living creature' to 'have a soul'.

Next, for destructive purposes see whether he renders more than one property of the same thing, without a definite proviso that he is stating more than one: for then the property will not have been correctly stated. For just as in the case of definitions too there should be no further addition beside the expression which shows the essence, so too in the case of properties nothing further should be rendered beside the expression that constitutes the property mentioned: for such an addition is made to no purpose. Thus (e.g.) a man who has said that it is a property of fire to be 'the most rarefied and lightest body' has rendered more than one property (for each term is a true predicate of fire alone); and so it could not be a correctly stated property of fire to be 'the most rarefied and lightest body'. On the other hand, for constructive purposes, see whether he has avoided rendering more than one property of the same thing, and has rendered one only: for then the property will in

this respect have been correctly stated. Thus (e.g.) a man who has said that it is a property of a liquid to be a ‘body adaptable to every shape’ has rendered as its property a single character and not several, and so the property of ‘liquid’ would in this respect have been correctly stated.

3

Next, for destructive purposes, see whether he has employed either the actual subject whose property he is rendering, or any of its species: for then the property will not have been correctly stated. For the object of rendering the property is that people may understand: now the subject itself is just as unintelligible as it was to start with, while any one of its species is posterior to it, and so is no more intelligible. Accordingly it is impossible to understand anything further by the use of these terms. Thus (e.g.) any one who has said that it is property of ‘animal’ to be ‘the substance to which «man» belongs as a species’ has employed one of its species, and therefore the property could not have been correctly stated. For constructive purposes, on the other hand, see whether he avoids introducing either the subject itself or any of its species: for then the property will in this respect have been correctly stated. Thus (e.g.) a man who has stated that it is a property of a living creature to be ‘compounded of soul and body’ has avoided introducing among the rest either the subject itself or any of its species, and therefore in this respect the property of a ‘living creature’ would have been correctly rendered.

You should inquire in the same way also in the case of other terms that do or do not make the subject more intelligible: thus, for destructive purposes, see whether he has employed anything either opposite to the subject or, in general, anything simultaneous by nature with it or posterior to it: for then the property will not have been correctly stated. For an opposite is simultaneous by nature with its opposite, and what is simultaneous by nature or is posterior to it does not make its subject more intelligible. Thus (e.g.) any one who has said that it is a property of good to be ‘the most direct opposite of evil’, has employed the opposite of good, and so the property of good could not have been correctly rendered. For constructive purposes, on the other hand, see whether he has avoided employing anything either opposite to, or, in general, simultaneous by nature with the subject, or posterior to it: for then the property will in this respect have been correctly rendered. Thus (e.g.) a man who has stated that it is a property of knowledge to be ‘the most convincing conception’ has avoided employing anything either opposite to, or simultaneous by nature with, or posterior to, the subject; and so the property of knowledge would in this respect have been correctly stated.

Next, for destructive purposes, see whether he has rendered as property something that does not always follow the subject but sometimes ceases to be its property: for then the property will not have been correctly described. For there is no necessity either that the name of the subject must also be true of anything to which we find such an attribute belonging; nor yet that the name of the subject will be untrue of anything to which such an attribute is found not to belong. Moreover, in addition to this, even after he has rendered the property it will not be clear whether it belongs, seeing that it is the kind of attribute that may fall: and so the property will not be clear. Thus (e.g.) a man who has stated that it is a property of animal ‘sometimes to move and sometimes to stand still’ rendered the kind of property which sometimes is not a property, and so the property could not have been correctly stated. For constructive purposes, on the other hand, see whether he has rendered something that of necessity must always be a property: for then the property will have been in this respect correctly stated. Thus (e.g.) a man who has stated that it is a property of virtue to be ‘what makes its possessor good’ has rendered as property something that always follows, and so the property of virtue would in this respect have been correctly rendered.

Next, for destructive purposes, see whether in rendering the property of the present time he has omitted to make a definite proviso that it is the property of the present time which he is rendering: for else the property will not have been correctly stated. For in the first place, any unusual procedure always needs a definite proviso: and it is the usual procedure for everybody to render as property some attribute that always follows. In the second place, a man who omits to provide definitely whether it was the property of the present time which he intended to state, is obscure: and one should not give any occasion for adverse criticism. Thus (e.g.) a man who has stated it as the property of a particular man 'to be sitting with a particular man', states the property of the present time, and so he cannot have rendered the property correctly, seeing that he has described it without any definite proviso. For constructive purposes, on the other hand, see whether, in rendering the property of the present time, he has, in stating it, made a definite proviso that it is the property of the present time that he is stating: for then the property will in this respect have been correctly stated. Thus (e.g.) a man who has said that it is the property of a particular man 'to be walking now', has made this distinction in his statement, and so the property would have been correctly stated.

Next, for destructive purposes, see whether he has rendered a property of the kind whose appropriateness is not obvious except by sensation: for then the property will not have been correctly stated. For every sensible attribute, once it is taken beyond the sphere of sensation, becomes uncertain. For it is not clear whether it still belongs, because it is evidenced only by sensation. This principle will be true in the case of any attributes that do not always and necessarily follow. Thus (e.g.) any one who has stated that it is a property of the sun to be 'the brightest star that moves over the earth', has used in describing the property an expression of that kind, viz. 'to move over the earth', which is evidenced by sensation; and so the sun's property could not have been correctly rendered: for it will be uncertain, whenever the sun sets, whether it continues to move over the earth, because sensation then fails us. For constructive purposes, on the other hand, see whether he has rendered the property of a kind that is not obvious to sensation, or, if it be sensible, must clearly belong of necessity: for then the property will in this respect have been correctly stated. Thus (e.g.) a man who has stated that it is a property of a surface to be 'the primary thing that is coloured', has introduced amongst the rest a sensible quality, 'to be coloured', but still a quality such as manifestly always belongs, and so the property of 'surface' would in this respect have been correctly rendered.

Next, for destructive purposes, see whether he has rendered the definition as a property: for then the property will not have been correctly stated: for the property of a thing ought not to show its essence. Thus (e.g.) a man who has said that it is the property of man to be 'a walking, biped animal' has rendered a property of man so as to signify his essence, and so the property of man could not have been correctly rendered. For constructive purposes, on the other hand, see whether the property which he has rendered forms a predicate convertible with its subject, without, however, signifying its essence: for then the property will in this respect have been correctly rendered. Thus (e.g.) he who has stated that it is a property of man to be a 'naturally civilized animal' has rendered the property so as to be convertible with its subject, without, however, showing its essence, and so the property of man' would in this respect have been correctly rendered.

Next, for destructive purposes, see whether he has rendered the property without having placed the subject within its essence. For of properties, as also of definitions, the first term to be rendered should be the genus, and then the rest of it should be appended immediately afterwards, and should distinguish its subject from other things. Hence a property which is not stated in this way could not have been correctly rendered. Thus (e.g.) a man who has said that it is a property of a living

creature to ‘have a soul’ has not placed ‘living creature’ within its essence, and so the property of a living creature could not have been correctly stated. For constructive purposes, on the other hand, see whether a man first places within its essence the subject whose property he is rendering, and then appends the rest: for then the property will in this respect have been correctly rendered. Thus (e.g.) he who has stated that is a property of man to be an ‘animal capable of receiving knowledge’, has rendered the property after placing the subject within its essence, and so the property of ‘man’ would in this respect have been correctly rendered.

4

The inquiry, then, whether the property has been correctly rendered or no, should be made by these means. The question, on the other hand, whether what is stated is or is not a property at all, you should examine from the following points of view. For the commonplace arguments which establish absolutely that the property is accurately stated will be the same as those that constitute it a property at all: accordingly they will be described in the course of them.

Firstly, then, for destructive purposes, take a look at each subject of which he has rendered the property, and see (e.g.) if it fails to belong to any of them at all, or to be true of them in that particular respect, or to be a property of each of them in respect of that character of which he has rendered the property: for then what is stated to be a property will not be a property. Thus, for example, inasmuch as it is not true of the geometrician that he ‘cannot be deceived by an argument’ (for a geometrician is deceived when his figure is misdrawn), it could not be a property of the man of science that he is not deceived by an argument. For constructive purposes, on the other hand, see whether the property rendered be true of every instance, and true in that particular respect: for then what is stated not to be a property will be a property. Thus, for example, in as much as the description ‘an animal capable of receiving knowledge’ is true of every man, and true of him qua man, it would be a property of man to be ‘an animal capable of receiving knowledge’. commonplace rule means – for destructive purposes, see if the description fails to be true of that of which the name is true; and if the name fails to be true of that of which the description is true: for constructive purposes, on the other hand, see if the description too is predicated of that of which the name is predicated, and if the name too is predicated of that of which the description is predicated.]

Next, for destructive purposes, see if the description fails to apply to that to which the name applies, and if the name fails to apply to that to which the description applies: for then what is stated to be a property will not be a property. Thus (e.g.) inasmuch as the description ‘a living being that partakes of knowledge’ is true of God, while ‘man’ is not predicated of God, to be a living being that partakes of knowledge’ could not be a property of man. For constructive purposes, on the other hand, see if the name as well be predicated of that of which the description is predicated, and if the description as well be predicated of that of which the name is predicated. For then what is stated not to be a property will be a property. Thus (e.g.) the predicate ‘living creature’ is true of that of which ‘having a soul’ is true, and ‘having a soul’ is true of that of which the predicate ‘living creature’ is true; and so ‘having a soul would be a property of ‘living creature’.

Next, for destructive purposes, see if he has rendered a subject as a property of that which is described as ‘in the subject’: for then what has been stated to be a property will not be a property. Thus (e.g.) inasmuch as he who has rendered ‘fire’ as the property of ‘the body with the most rarefied particles’, has rendered the subject as the property of its predicate, ‘fire’ could not be a property of ‘the body with the most rarefied particles’. The reason why the subject will not be a property of that which is found in the subject is this, that then the same thing will be the property of a number of things that are specifically different. For the same thing has quite a number of

specifically different predicates that belong to it alone, and the subject will be a property of all of these, if any one states the property in this way. For constructive purposes, on the other hand, see if he has rendered what is found in the subject as a property of the subject: for then what has been stated not to be a property will be a property, if it be predicated only of the things of which it has been stated to be the property. Thus (e.g.) he who has said that it is a property of 'earth' to be 'specifically the heaviest body' has rendered of the subject as its property something that is said of the thing in question alone, and is said of it in the manner in which a property is predicated, and so the property of earth would have been rightly stated.

Next, for destructive purposes, see if he has rendered the property as partaken of: for then what is stated to be a property will not be a property. For an attribute of which the subject partakes is a constituent part of its essence: and an attribute of that kind would be a differentia applying to some one species. E.g. inasmuch as he who has said that 'walking on two feet' is property of man has rendered the property as partaken of, 'walking on two feet' could not be a property of 'man'. For constructive purposes, on the other hand, see if he has avoided rendering the property as partaken of, or as showing the essence, though the subject is predicated convertibly with it: for then what is stated not to be a property will be a property. Thus (e.g.) he who has stated that to be 'naturally sentient' is a property of 'animal' has rendered the property neither as partaken of nor as showing the essence, though the subject is predicated convertibly with it; and so to be 'naturally sentient' would be a property of 'animal'.

Next, for destructive purposes, see if the property cannot possibly belong simultaneously, but must belong either as posterior or as prior to the attribute described in the name: for then what is stated to be a property will not be a property either never, or not always. Thus (e.g.) inasmuch as it is possible for the attribute 'walking through the market-place' to belong to an object as prior and as posterior to the attribute 'man', 'walking through the market-place' could not be a property of 'man' either never, or not always. For constructive purposes, on the other hand, see if it always and of necessity belongs simultaneously, without being either a definition or a differentia: for then what is stated not to be a property will be a property. Thus (e.g.) the attribute 'an animal capable of receiving knowledge' always and of necessity belongs simultaneously with the attribute 'man', and is neither differentia nor definition of its subject, and so 'an animal capable of receiving knowledge' would be a property of 'man'.

Next, for destructive purposes, see if the same thing fails to be a property of things that are the same as the subject, so far as they are the same: for then what is stated to be a property will not be a property. Thus, for example, inasmuch as it is no property of a 'proper object of pursuit' to 'appear good to certain persons', it could not be a property of the 'desirable' either to 'appear good to certain persons': for 'proper object of pursuit' and 'desirable' mean the same. For constructive purposes, on the other hand, see if the same thing be a property of something that is the same as the subject, in so far as it is the same. For then is stated not to be a property will be a property. Thus (e.g.) inasmuch as it is called a property of a man, in so far as he is a man, 'to have a tripartite soul', it would also be a property of a mortal, in so far as he is a mortal, to have a tripartite soul. This commonplace rule is useful also in dealing with Accident: for the same attributes ought either to belong or not belong to the same things, in so far as they are the same.

Next, for destructive purposes, see if the property of things that are the same in kind as the subject fails to be always the same in kind as the alleged property: for then neither will what is stated to be the property of the subject in question. Thus (e.g.) inasmuch as a man and a horse are the same in kind, and it is not always a property of a horse to stand by its own initiative, it could not be a property of a man to move by his own initiative; for to stand and to move by his own initiative are the same in kind, because they belong to each of them in so far as each is an 'animal'. For

constructive purposes, on the other hand, see if of things that are the same in kind as the subject the property that is the same as the alleged property is always true: for then what is stated not to be a property will be a property. Thus (e.g.) since it is a property of man to be a ‘walking biped,’ it would also be a property of a bird to be a ‘flying biped’: for each of these is the same in kind, in so far as the one pair have the sameness of species that fall under the same genus, being under the genus ‘animal’, while the other pair have that of differentiae of the genus, viz. of ‘animal’. This commonplace rule is deceptive whenever one of the properties mentioned belongs to some one species only while the other belongs to many, as does ‘walking quadruped’.

Inasmuch as ‘same’ and ‘different’ are terms used in several senses, it is a job to render to a sophistical questioner a property that belongs to one thing and that only. For an attribute that belongs to something qualified by an accident will also belong to the accident taken along with the subject which it qualifies; e.g. an attribute that belongs to ‘man’ will belong also to ‘white man’, if there be a white man, and one that belongs to ‘white man’ will belong also to ‘man’. One might, then, bring captious criticism against the majority of properties, by representing the subject as being one thing in itself, and another thing when combined with its accident, saying, for example, that ‘man’ is one thing, and white man’ another, and moreover by representing as different a certain state and what is called after that state. For an attribute that belongs to the state will belong also to what is called after that state, and one that belongs to what is called after a state will belong also to the state: e.g. inasmuch as the condition of the scientist is called after his science, it could not be a property of ‘science’ that it is ‘incontrovertible by argument’; for then the scientist also will be incontrovertible by argument. For constructive purposes, however, you should say that the subject of an accident is not absolutely different from the accident taken along with its subject; though it is called ‘another’ thing because the mode of being of the two is different: for it is not the same thing for a man to be a man and for a white man to be a white man. Moreover, you should take a look along at the inflections, and say that the description of the man of science is wrong: one should say not ‘it’ but ‘he is incontrovertible by argument’; while the description of Science is wrong too: one should say not ‘it’ but ‘she is incontrovertible by argument’. For against an objector who sticks at nothing the defence should stick at nothing.

5

Next, for destructive purposes, see if, while intending to render an attribute that naturally belongs, he states it in his language in such a way as to indicate one that invariably belongs: for then it would be generally agreed that what has been stated to be a property is upset. Thus (e.g.) the man who has said that ‘biped’ is a property of man intends to render the attribute that naturally belongs, but his expression actually indicates one that invariably belongs: accordingly, ‘biped’ could not be a property of man: for not every man is possessed of two feet. For constructive purposes, on the other hand, see if he intends to render the property that naturally belongs, and indicates it in that way in his language: for then the property will not be upset in this respect. Thus (e.g.) he who renders as a property of ‘man’ the phrase ‘an animal capable of receiving knowledge’ both intends, and by his language indicates, the property that belongs by nature, and so ‘an animal capable of receiving knowledge’ would not be upset or shown in that respect not to be a property of man.

Moreover, as regards all the things that are called as they are primarily after something else, or primarily in themselves, it is a job to render the property of such things. For if you render a property as belonging to the subject that is so called after something else, then it will be true of its primary subject as well; whereas if you state it of its primary subject, then it will be predicated also of the thing that is so called after this other. Thus (e.g.) if any one renders , coloured’ as the property of

‘surface’, ‘coloured’ will be true of body as well; whereas if he render it of ‘body’, it will be predicated also of ‘surface’. Hence the name as well will not be true of that of which the description is true.

In the case of some properties it mostly happens that some error is incurred because of a failure to define how as well as to what things the property is stated to belong. For every one tries to render as the property of a thing something that belongs to it either naturally, as ‘biped’ belongs to ‘man’, or actually, as ‘having four fingers’ belongs to a particular man, or specifically, as ‘consisting of most rarefied particles’ belongs to ‘fire’, or absolutely, as ‘life’ to ‘living being’, or one that belongs to a thing only as called after something else, as ‘wisdom’ to the ‘soul’, or on the other hand primarily, as ‘wisdom’ to the ‘rational faculty’, or because the thing is in a certain state, as ‘incontrovertible by argument’ belongs to a ‘scientist’ (for simply and solely by reason of his being in a certain state will he be ‘incontrovertible by argument’), or because it is the state possessed by something, as ‘incontrovertible by argument’ belongs to ‘science’, or because it is partaken of, as ‘sensation’ belongs to ‘animal’ (for other things as well have sensation, e.g. man, but they have it because they already partake of ‘animal’), or because it partakes of something else, as ‘life’ belongs to a particular kind of ‘living being’. Accordingly he makes a mistake if he has failed to add the word ‘naturally’, because what belongs naturally may fail to belong to the thing to which it naturally belongs, as (e.g.) it belongs to a man to have two feet: so too he errs if he does not make a definite proviso that he is rendering what actually belongs, because one day that attribute will not be what it now is, e.g. the man’s possession of four fingers. So he errs if he has not shown that he states a thing to be such and such primarily, or that he calls it so after something else, because then its name too will not be true of that of which the description is true, as is the case with ‘coloured’, whether rendered as a property of ‘surface’ or of ‘body’. So he errs if he has not said beforehand that he has rendered a property to a thing either because that thing possesses a state, or because it is a state possessed by something; because then it will not be a property. For, supposing he renders the property to something as being a state possessed, it will belong to what possesses that state; while supposing he renders it to what possesses the state, it will belong to the state possessed, as did ‘incontrovertible by argument’ when stated as a property of ‘science’ or of the ‘scientist’. So he errs if he has not indicated beforehand that the property belongs because the thing partakes of, or is partaken of by, something; because then the property will belong to certain other things as well. For if he renders it because its subject is partaken of, it will belong to the things which partake of it; whereas if he renders it because its subject partakes of something else, it will belong to the things partaken of, as (e.g.) if he were to state ‘life’ to be a property of a ‘particular kind of living being’, or just of ‘living being. So he errs if he has not expressly distinguished the property that belongs specifically, because then it will belong only to one of the things that fall under the term of which he states the property: for the superlative belongs only to one of them, e.g. ‘lightest’ as applied to ‘fire’. Sometimes, too, a man may even add the word ‘specifically’, and still make a mistake. For the things in question should all be of one species, whenever the word ‘specifically’ is added: and in some cases this does not occur, as it does not, in fact, in the case of fire. For fire is not all of one species; for live coals and flame and light are each of them ‘fire’, but are of different species. The reason why, whenever ‘specifically’ is added, there should not be any species other than the one mentioned, is this, that if there be, then the property in question will belong to some of them in a greater and to others in a less degree, as happens with ‘consisting of most rarefied particles’ in the case of fire: for ‘light’ consists of more rarefied particles than live coals and flame. And this should not happen unless the name too be predicated in a greater degree of that of which the description is truer; otherwise the rule that where the description is truer the name too should be truer is not fulfilled. Moreover, in addition to this, the same attribute will be the property both of the term

which has it absolutely and of that element therein which has it in the highest degree, as is the condition of the property ‘consisting of most rarefied particles’ in the case of ‘fire’: for this same attribute will be the property of ‘light’ as well: for it is ‘light’ that ‘consists of the most rarefied particles’. If, then, any one else renders a property in this way one should attack it; for oneself, one should not give occasion for this objection, but should define in what manner one states the property at the actual time of making the statement.

Next, for destructive purposes, see if he has stated a thing as a property of itself: for then what has been stated to be a property will not be a property. For a thing itself always shows its own essence, and what shows the essence is not a property but a definition. Thus (e.g.) he who has said that ‘becoming’ is a property of ‘beautiful’ has rendered the term as a property of itself (for ‘beautiful’ and ‘becoming’ are the same); and so ‘becoming’ could not be a property of ‘beautiful’. For constructive purposes, on the other hand, see if he has avoided rendering a thing as a property of itself, but has yet stated a convertible predicate: for then what is stated not to be a property will be a property. Thus he who has stated ‘animate substance’ as a property of ‘living-creature’ has not stated ‘living-creature’ as a property of itself, but has rendered a convertible predicate, so that ‘animate substance’ would be a property of ‘living-creature’.

Next, in the case of things consisting of like parts, you should look and see, for destructive purposes, if the property of the whole be not true of the part, or if that of the part be not predicated of the whole: for then what has been stated to be the property will not be a property. In some cases it happens that this is so: for sometimes in rendering a property in the case of things that consist of like parts a man may have his eye on the whole, while sometimes he may address himself to what is predicated of the part: and then in neither case will it have been rightly rendered. Take an instance referring to the whole: the man who has said that it is a property of the ‘sea’ to be ‘the largest volume of salt water’, has stated the property of something that consists of like parts, but has rendered an attribute of such a kind as is not true of the part (for a particular sea is not ‘the largest volume of salt water’); and so the largest volume of salt water’ could not be a property of the ‘sea’. Now take one referring to the part: the man who has stated that it is a property of ‘air’ to be ‘breathable’ has stated the property of something that consists of like parts, but he has stated an attribute such as, though true of some air, is still not predicable of the whole (for the whole of the air is not breathable); and so ‘breathable’ could not be a property of ‘air’. For constructive purposes, on the other hand, see whether, while it is true of each of the things with similar parts, it is on the other hand a property of them taken as a collective whole: for then what has been stated not to be a property will be a property. Thus (e.g.) while it is true of earth everywhere that it naturally falls downwards, it is a property of the various particular pieces of earth taken as ‘the Earth’, so that it would be a property of ‘earth’ ‘naturally to fall downwards’.

6

Next, look from the point of view of the respective opposites, and first (a) from that of the contraries, and see, for destructive purposes, if the contrary of the term rendered fails to be a property of the contrary subject. For then neither will the contrary of the first be a property of the contrary of the second. Thus (e.g.) inasmuch as injustice is contrary to justice, and the lowest evil to the highest good, but ‘to be the highest good’ is not a property of ‘justice’, therefore ‘to be the lowest evil’ could not be a property of ‘injustice’. For constructive purposes, on the other hand, see if the contrary is the property of the contrary: for then also the contrary of the first will be the property of the contrary of the second. Thus (e.g.) inasmuch as evil is contrary to good, and

objectionable to desirable, and ‘desirable’ is a property of ‘good’, ‘objectionable’ would be a property of ‘evil’.
Secondly (h) look from the point of view of relative opposites and see, for destructive purposes, if the correlative of the term rendered fails to be a property of the correlative of the subject: for then neither will the correlative of the first be a property of the correlative of the second. Thus (e.g.) inasmuch as ‘double’ is relative to ‘half’, and ‘in excess’ to ‘exceeded’, while ‘in excess’ is not a property of ‘double’, exceeded’ could not be a property of ‘half’. For constructive purposes, on the other hand, see if the correlative of the alleged property is a property of the subject’s correlative: for then also the correlative of the first will be a property of the correlative of the second: e.g. inasmuch as ‘double’ is relative to ‘half’, and the proportion 1:2 is relative to the proportion 2:1, while it is a property of ‘double’ to be ‘in the proportion of 2 to 1’, it would be a property of ‘half’ to be ‘in the proportion of 1 to 2’.
Thirdly (c) for destructive purposes, see if an attribute described in terms of a state (X) fails to be a property of the given state (Y): for then neither will the attribute described in terms of the privation (of X) be a property of the privation (of Y). Also if, on the other hand, an attribute described in terms of the privation (of X) be not a property of the given privation (of Y), neither will the attribute described in terms of the state (X) be a property of the state (Y). Thus, for example, inasmuch as it is not predicated as a property of ‘deafness’ to be a ‘lack of sensation’, neither could it be a property of ‘hearing’ to be a ‘sensation’. For constructive purposes, on the other hand, see if an attribute described in terms of a state (X) is a property of the given state (Y): for then also the attribute that is described in terms of the privation (of X) will be a property of the privation (of Y). Also, if an attribute described in terms of a privation (of X) be a property of the privation (of Y), then also the attribute that is described in terms of the state (X) will be a property of the state (Y). Thus (e.g.) inasmuch as ‘to see’ is a property of ‘sight’, inasmuch as we have sight, ‘failure to see’ would be a property of ‘blindness’, inasmuch as we have not got the sight we should naturally have.
Next, look from the point of view of positive and negative terms; and first (a) from the point of view of the predicates taken by themselves. This common-place rule is useful only for a destructive purpose. Thus (e.g.) see if the positive term or the attribute described in terms of it is a property of the subject: for then the negative term or the attribute described in terms of it will not be a property of the subject. Also if, on the other hand, the negative term or the attribute described in terms of it is a property of the subject, then the positive term or the attribute described in terms of it will not be a property of the subject: e.g. inasmuch as ‘animate’ is a property of ‘living creature’, ‘inanimate’ could not be a property of ‘living creature’.
Secondly (b) look from the point of view of the predicates, positive or negative, and their respective subjects; and see, for destructive purposes, if the positive term falls to be a property of the positive subject: for then neither will the negative term be a property of the negative subject. Also, if the negative term fails to be a property of the negative subject, neither will the positive term be a property of the positive subject. Thus (e.g.) inasmuch as ‘animal’ is not a property of ‘man’, neither could ‘not-animal’ be a property of ‘not-man’. Also if ‘not-animal’ seems not to be a property of ‘not-man’, neither will ‘animal’ be a property of ‘man’. For constructive purposes, on the other hand, see if the positive term is a property of the positive subject: for then the negative term will be a property of the negative subject as well. Also if the negative term be a property of the negative subject, the positive will be a property of the positive as well. Thus (e.g.) inasmuch as it is a property of ‘not-living being’ ‘not to live’, it would be a property of ‘living being’ ‘to live’: also if it seems to be a property of ‘living being’ ‘to live’, it will also seem to be a property of ‘not-living being’ ‘not to live’.

Thirdly (c) look from the point of view of the subjects taken by themselves, and see, for destructive purposes, if the property rendered is a property of the positive subject: for then the same term will not be a property of the negative subject as well. Also, if the term rendered be a property of the negative subject, it will not be a property of the positive. Thus (e.g.) inasmuch as ‘animate’ is a property of ‘living creature’, ‘animate’ could not be a property of ‘not-living creature’. For constructive purposes, on the other hand, if the term rendered fails to be a property of the affirmative subject it would be a property of the negative. This commonplace rule is, however, deceptive: for a positive term is not a property of a negative, or a negative of a positive. For a positive term does not belong at all to a negative, while a negative term, though it belongs to a positive, does not belong as a property.

Next, look from the point of view of the coordinate members of a division, and see, for destructive purposes, if none of the co-ordinate members (parallel with the property rendered) be a property of any of the remaining set of co-ordinate members (parallel with the subject): for then neither will the term stated be a property of that of which it is stated to be a property. Thus (e.g.) inasmuch as ‘sensible living being’ is not a property of any of the other living beings, ‘intelligible living being’ could not be a property of God. For constructive purposes, on the other hand, see if some one or other of the remaining co-ordinate members (parallel with the property rendered) be a property of each of these co-ordinate members (parallel with the subject): for then the remaining one too will be a property of that of which it has been stated not to be a property. Thus (e.g.) inasmuch as it is a property of ‘wisdom’ to be essentially ‘the natural virtue of the rational faculty’, then, taking each of the other virtues as well in this way, it would be a property of ‘temperance’ to be essentially ‘the natural virtue of the faculty of desire’.

Next, look from the point of view of the inflexions, and see, for destructive purposes, if the inflexion of the property rendered fails to be a property of the inflexion of the subject: for then neither will the other inflexion be a property of the other inflexion. Thus (e.g.) inasmuch as ‘beautifully’ is not a property of ‘justly’, neither could ‘beautiful’ be a property of ‘just’. For constructive purposes, on the other hand, see if the inflexion of the property rendered is a property of the inflexion of the subject: for then also the other inflexion will be a property of the other inflexion. Thus (e.g.) inasmuch as ‘walking biped’ is a property of man, it would also be any one’s property ‘as a man’ to be described ‘as a walking biped’. Not only in the case of the actual term mentioned should one look at the inflexions, but also in the case of its opposites, just as has been laid down in the case of the former commonplace rules as well.’ Thus, for destructive purposes, see if the inflexion of the opposite of the property rendered fails to be the property of the inflexion of the opposite of the subject: for then neither will the inflexion of the other opposite be a property of the inflexion of the other opposite. Thus (e.g.) inasmuch as ‘well’ is not a property of ‘justly’, neither could ‘badly’ be a property of ‘unjustly’. For constructive purposes, on the other hand, see if the inflexion of the opposite of the property originally suggested is a property of the inflexion of the opposite of the original subject: for then also the inflexion of the other opposite will be a property of the inflexion of the other opposite. Thus (e.g.) inasmuch as ‘best’ is a property of ‘the good’, ‘worst’ also will be a property of ‘the evil’.

7

Next, look from the point of view of things that are in a like relation, and see, for destructive purposes, if what is in a relation like that of the property rendered fails to be a property of what is in a relation like that of the subject: for then neither will what is in a relation like that of the first be a property of what is in a relation like that of the second. Thus (e.g.) inasmuch as the relation of the

builder towards the production of a house is like that of the doctor towards the production of health, and it is not a property of a doctor to produce health, it could not be a property of a builder to produce a house. For constructive purposes, on the other hand, see if what is in a relation like that of the property rendered is a property of what is in a relation like that of the subject: for then also what is in a relation like that of the first will be a property of what is in a relation like that of the second. Thus (e.g.) inasmuch as the relation of a doctor towards the possession of ability to produce health is like that of a trainer towards the possession of ability to produce vigour, and it is a property of a trainer to possess the ability to produce vigour, it would be a property of a doctor to possess the ability to produce health.

Next look from the point of view of things that are identically related, and see, for destructive purposes, if the predicate that is identically related towards two subjects fails to be a property of the subject which is identically related to it as the subject in question; for then neither will the predicate that is identically related to both subjects be a property of the subject which is identically related to it as the first. If, on the other hand, the predicate which is identically related to two subjects is the property of the subject which is identically related to it as the subject in question, then it will not be a property of that of which it has been stated to be a property. (e.g.) inasmuch as prudence is identically related to both the noble and the base, since it is knowledge of each of them, and it is not a property of prudence to be knowledge of the noble, it could not be a property of prudence to be knowledge of the base. If, on the other hand, it is a property of prudence to be the knowledge of the noble, it could not be a property of it to be the knowledge of the base.] For it is impossible for the same thing to be a property of more than one subject. For constructive purposes, on the other hand, this commonplace rule is of no use: for what is ‘identically related’ is a single predicate in process of comparison with more than one subject.

Next, for destructive purposes, see if the predicate qualified by the verb ‘to be’ fails to be a property of the subject qualified by the verb ‘to be’: for then neither will the destruction of the one be a property of the other qualified by the verb ‘to be destroyed’, nor will the ‘becoming’the one be a property of the other qualified by the verb ‘to become’. Thus (e.g.) inasmuch as it is not a property of ‘man’ to be an animal, neither could it be a property of becoming a man to become an animal; nor could the destruction of an animal be a property of the destruction of a man. In the same way one should derive arguments also from ‘becoming’ to ‘being’ and ‘being destroyed’, and from ‘being destroyed’ to ‘being’ and to ‘becoming’ exactly as they have just been given from ‘being’ to ‘becoming’ and ‘being destroyed’. For constructive purposes, on the other hand, see if the subject set down as qualified by the verb ‘to be’ has the predicate set down as so qualified, as its property: for then also the subject qualified by the very ‘to become’ will have the predicate qualified by ‘to become’ as its property, and the subject qualified by the verb to be destroyed’ will have as its property the predicate rendered with this qualification. Thus, for example, inasmuch as it is a property of man to be a mortal, it would be a property of becoming a man to become a mortal, and the destruction of a mortal would be a property of the destruction of a man. In the same way one should derive arguments also from ‘becoming’ and ‘being destroyed’ both to ‘being’ and to the conclusions that follow from them, exactly as was directed also for the purpose of destruction.

Next take a look at the ‘idea’ of the subject stated, and see, for destructive purposes, if the suggested property fails to belong to the ‘idea’ in question, or fails to belong to it in virtue of that character which causes it to bear the description of which the property was rendered: for then what has been stated to be a property will not be a property. Thus (e.g.) inasmuch as ‘being motionless’ does not belong to ‘man-himself’ qua ‘man’, but qua ‘idea’, it could not be a property of ‘man’ to be motionless. For constructive purposes, on the other hand, see if the property in question belongs to the idea, and belongs to it in that respect in virtue of which there is predicated of it that character

of which the predicate in question has been stated not to be a property: for then what has been stated not to be a property will be a property. Thus (e.g.) inasmuch as it belongs to 'living-creature-itself' to be compounded of soul and body, and further this belongs to it qua 'living-creature', it would be a property of 'living-creature' to be compounded of soul and body.

8

Next look from the point of view of greater and less degrees, and first (a) for destructive purposes, see if what is more-P fails to be a property of what is more-S: for then neither will what is less-P be a property of what is less-S, nor least-P of least-S, nor most-P of most-S, nor P simply of S simply. Thus (e.g.) inasmuch as being more highly coloured is not a property of what is more a body, neither could being less highly coloured be a property of what is less a body, nor being coloured be a property of body at all. For constructive purposes, on the other hand, see if what is more-P is a property of what is more-S: for then also what is less-P will be a property of what is less S, and least-P of least-S, and most-P of most-S, and P simply of S simply. Thus (e.g.) inasmuch as a higher degree of sensation is a property of a higher degree of life, a lower degree of sensation also would be a property of a lower degree of life, and the highest of the highest and the lowest of the lowest degree, and sensation simply of life simply.

Also you should look at the argument from a simple predication to the same qualified types of predication, and see, for destructive purposes, if P simply fails to be a property of S simply; for then neither will more-P be a property of more-S, nor less-P of less-S, nor most-P of most-S, nor least-P of least-S. Thus (e.g.) inasmuch as 'virtuous' is not a property of 'man', neither could 'more virtuous' be a property of what is 'more human'. For constructive purposes, on the other hand, see if P simply is a property of S simply: for then more P also will be a property of more-S, and less-P of less-S, and least-P of least-S, and most-P of most-S. Thus (e.g.) a tendency to move upwards by nature is a property of fire, and so also a greater tendency to move upwards by nature would be a property of what is more fiery. In the same way too one should look at all these matters from the point of view of the others as well.

Secondly (b) for destructive purposes, see if the more likely property fails to be a property of the more likely subject: for then neither will the less likely property be a property of the less likely subject. Thus (e.g.) inasmuch as 'perceiving' is more likely to be a property of 'animal' than 'knowing' of 'man', and 'perceiving' is not a property of 'animal', 'knowing' could not be a property of 'man'. For constructive purposes, on the other hand, see if the less likely property is a property of the less likely subject; for then too the more likely property will be a property of the more likely subject. Thus (e.g.) inasmuch as 'to be naturally civilized' is less likely to be a property of man than 'to live' of an animal, and it is a property of man to be naturally civilized, it would be a property of animal to live.

Thirdly (c) for destructive purposes, see if the predicate fails to be a property of that of which it is more likely to be a property: for then neither will it be a property of that of which it is less likely to be a property: while if it is a property of the former, it will not be a property of the latter. Thus (e.g.) inasmuch as 'to be coloured' is more likely to be a property of a 'surface' than of a 'body', and it is not a property of a surface, 'to be coloured' could not be a property of 'body'; while if it is a property of a 'surface', it could not be a property of a 'body'. For constructive purposes, on the other hand, this commonplace rule is not of any use: for it is impossible for the same thing to be a property of more than one thing.

Fourthly (d) for destructive purposes, see if what is more likely to be a property of a given subject fails to be its property: for then neither will what is less likely to be a property of it be its property.

Thus (e.g.) inasmuch as ‘sensible’ is more likely than ‘divisible’ to be a property of ‘animal’, and ‘sensible’ is not a property of animal, ‘divisible’ could not be a property of animal. For constructive purposes, on the other hand, see if what is less likely to be a property of it is a property; for then what is more likely to be a property of it will be a property as well. Thus, for example, inasmuch as ‘sensation’ is less likely to be a property of ‘animal’ than life’, and ‘sensation’ is a property of animal, ‘life’ would be a property of animal.

Next, look from the point of view of the attributes that belong in a like manner, and first (a) for destructive purposes, see if what is as much a property fails to be a property of that of which it is as much a property: for then neither will that which is as much a property as it be a property of that of which it is as much a property. Thus (e.g.) inasmuch as ‘desiring’ is as much a property of the faculty of desire as reasoning’ is a property of the faculty of reason, and desiring is not a property of the faculty of desire, reasoning could not be a property of the faculty of reason. For constructive purposes, on the other hand, see if what is as much a property is a property of that of which it is as much a property: for then also what is as much a property as it will be a property of that of which it is as much a property. Thus (e.g.) inasmuch as it is as much a property of ‘the faculty of reason’ to be ‘the primary seat of wisdom’ as it is of ‘the faculty of desire’ to be ‘the primary seat of temperance’, and it is a property of the faculty of reason to be the primary seat of wisdom, it would be a property of the faculty of desire to be the primary seat of temperance.

Secondly (b) for destructive purposes, see if what is as much a property of anything fails to be a property of it: for then neither will what is as much a property be a property of it. Thus (e.g.) inasmuch as ‘seeing’ is as much a property of man as ‘hearing’, and ‘seeing’ is not a property of man, ‘hearing’ could not be a property of man. For constructive purposes, on the other hand, see if what is as much a property of it is its property: for then what is as much a property of it as the former will be its property as well. Thus (e.g.) it is as much a property of the soul to be the primary possessor of a part that desires as of a part that reasons, and it is a property of the soul to be the primary possessor of a part that desires, and so it be a property of the soul to be the primary possessor of a part that reasons.

Thirdly (c) for destructive purposes, see if it fails to be a property of that of which it is as much a property: for then neither will it be a property of that of which it is as much a property as of the former, while if it be a property of the former, it will not be a property of the other. Thus (e.g.) inasmuch as ‘to burn’ is as much a property of ‘flame’ as of ‘live coals’, and ‘to burn’ is not a property of flame, ‘to burn’ could not be a property of live coals: while if it is a property of flame, it could not be a property of live coals. For constructive purposes, on the other hand, this commonplace rule is of no use.

The rule based on things that are in a like relation’ differs from the rule based on attributes that belong in a like manner,’ because the former point is secured by analogy, not from reflection on the belonging of any attribute, while the latter is judged by a comparison based on the fact that an attribute belongs.

Next, for destructive purposes, see if in rendering the property potentially, he has also through that potentiality rendered the property relatively to something that does not exist, when the potentiality in question cannot belong to what does not exist: for then what is stated to be a property will not be a property. Thus (e.g.) he who has said that ‘breathable’ is a property of ‘air’ has, on the one hand, rendered the property potentially (for that is ‘breathable’ which is such as can be breathed), and on the other hand has also rendered the property relatively to what does not exist: – for while air may exist, even though there exist no animal so constituted as to breathe the air, it is not possible to breathe it if no animal exist: so that it will not, either, be a property of air to be such as can be

breathed at a time when there exists no animal such as to breathe it and so it follows that ‘breathable’ could not be a property of air.
For constructive purposes, see if in rendering the property potentially he renders the property either relatively to something that exists, or to something that does not exist, when the potentiality in question can belong to what does not exist: for then what has been stated not to be a property will be a property. Thus e.g.) he who renders it as a property of ‘being’ to be ‘capable of being acted upon or of acting’, in rendering the property potentially, has rendered the property relatively to something that exists: for when ‘being’ exists, it will also be capable of being acted upon or of acting in a certain way: so that to be ‘capable of being acted upon or of acting’ would be a property of ‘being’.
Next, for destructive purposes, see if he has stated the property in the superlative: for then what has been stated to be a property will not be a property. For people who render the property in that way find that of the object of which the description is true, the name is not true as well: for though the object perish the description will continue in being none the less; for it belongs most nearly to something that is in being. An example would be supposing any one were to render ‘the lightest body’ as a property of ‘fire’: for, though fire perish, there eh re will still be some form of body that is the lightest, so that ‘the lightest body’ could not be a property of fire. For constructive purposes, on the other hand, see if he has avoided rendering the property in the superlative: for then the property will in this respect have been property of man has not rendered the property correctly stated. Thus (e.g.) inasmuch as he in the superlative, the property would in who states ‘a naturally civilized animal’ as a this respect have been correctly stated.

Book VI

1

The discussion of Definitions falls into five parts. For you have to show either (1) that it is not true at all to apply the expression as well to that to which the term is applied (for the definition of Man ought to be true of every man); or (2) that though the object has a genus, he has failed to put the object defined into the genus, or to put it into the appropriate genus (for the framer of a definition should first place the object in its genus, and then append its differences: for of all the elements of the definition the genus is usually supposed to be the principal mark of the essence of what is defined): or (3) that the expression is not peculiar to the object (for, as we said above as well, a definition ought to be peculiar): or else (4) see if, though he has observed all the aforesaid cautions, he has yet failed to define the object, that is, to express its essence. (5) It remains, apart from the foregoing, to see if he has defined it, but defined it incorrectly.
Whether, then, the expression be not also true of that of which the term is true you should proceed to examine according to the commonplace rules that relate to Accident. For there too the question is always ‘Is so and so true or untrue?’: for whenever we argue that an accident belongs, we declare it to be true, while whenever we argue that it does not belong, we declare it to be untrue. If, again, he has failed to place the object in the appropriate genus, or if the expression be not peculiar to the object, we must go on to examine the case according to the commonplace rules that relate to genus and property.
It remains, then, to prescribe how to investigate whether the object has been either not defined at all, or else defined incorrectly. First, then, we must proceed to examine if it has been defined

incorrectly: for with anything it is easier to do it than to do it correctly. Clearly, then, more mistakes are made in the latter task on account of its greater difficulty. Accordingly the attack becomes easier in the latter case than in the former.

Incorrectness falls into two branches: (1) first, the use of obscure language (for the language of a definition ought to be the very clearest possible, seeing that the whole purpose of rendering it is to make something known); (secondly, if the expression used be longer than is necessary: for all additional matter in a definition is superfluous. Again, each of the aforesaid branches is divided into a number of others.

2

One commonplace rule, then, in regard to obscurity is, See if the meaning intended by the definition involves an ambiguity with any other, e.g. ‘Becoming is a passage into being’, or ‘Health is the balance of hot and cold elements’. Here ‘passage’ and ‘balance’ are ambiguous terms: it is accordingly not clear which of the several possible senses of the term he intends to convey. Likewise also, if the term defined be used in different senses and he has spoken without distinguishing between them: for then it is not clear to which of them the definition rendered applies, and one can then bring a captious objection on the ground that the definition does not apply to all the things whose definition he has rendered: and this kind of thing is particularly easy in the case where the definer does not see the ambiguity of his terms. Or, again, the questioner may himself distinguish the various senses of the term rendered in the definition, and then institute his argument against each: for if the expression used be not adequate to the subject in any of its senses, it is clear that he cannot have defined it in any sense aright.

Another rule is, See if he has used a metaphorical expression, as, for instance, if he has defined knowledge as ‘unsupplantable’, or the earth as a ‘nurse’, or temperance as a ‘harmony’. For a metaphorical expression is always obscure. It is possible, also, to argue sophistically against the user of a metaphorical expression as though he had used it in its literal sense: for the definition stated will not apply to the term defined, e.g. in the case of temperance: for harmony is always found between notes. Moreover, if harmony be the genus of temperance, then the same object will occur in two genera of which neither contains the other: for harmony does not contain virtue, nor virtue harmony. Again, see if he uses terms that are unfamiliar, as when Plato describes the eye as ‘brow-shaded’, or a certain spider as poison-fanged’, or the marrow as ‘boneformed’. For an unusual phrase is always obscure.

Sometimes a phrase is used neither ambiguously, nor yet metaphorically, nor yet literally, as when the law is said to be the ‘measure’ or ‘image’ of the things that are by nature just. Such phrases are worse than metaphor; for the latter does make its meaning to some extent clear because of the likeness involved; for those who use metaphors do so always in view of some likeness: whereas this kind of phrase makes nothing clear; for there is no likeness to justify the description ‘measure’ or ‘image’, as applied to the law, nor is the law ordinarily so called in a literal sense. So then, if a man says that the law is literally a ‘measure’ or an ‘image’, he speaks falsely: for an image is something produced by imitation, and this is not found in the case of the law. If, on the other hand, he does not mean the term literally, it is clear that he has used an unclear expression, and one that is worse than any sort of metaphorical expression.

Moreover, see if from the expression used the definition of the contrary be not clear; for definitions that have been correctly rendered also indicate their contraries as well. Or, again, see if, when it is merely stated by itself, it is not evident what it defines: just as in the works of the old painters, unless there were an inscription, the figures used to be unrecognizable.

3

If, then, the definition be not clear, you should proceed to examine on lines such as these. If, on the other hand, he has phrased the definition redundantly, first of all look and see whether he has used any attribute that belongs universally, either to real objects in general, or to all that fall under the same genus as the object defined: for the mention of this is sure to be redundant. For the genus ought to divide the object from things in general, and the differentia from any of the things contained in the same genus. Now any term that belongs to everything separates off the given object from absolutely nothing, while any that belongs to all the things that fall under the same genus does not separate it off from the things contained in the same genus. Any addition, then, of that kind will be pointless.

Or see if, though the additional matter may be peculiar to the given term, yet even when it is struck out the rest of the expression too is peculiar and makes clear the essence of the term. Thus, in the definition of man, the addition 'capable of receiving knowledge' is superfluous; for strike it out, and still the expression is peculiar and makes clear his essence. Speaking generally, everything is superfluous upon whose removal the remainder still makes the term that is being defined clear. Such, for instance, would also be the definition of the soul, assuming it to be stated as a 'self-moving number'; for the soul is just 'the self-moving', as Plato defined it. Or perhaps the expression used, though appropriate, yet does not declare the essence, if the word 'number' be eliminated. Which of the two is the real state of the case it is difficult to determine clearly: the right way to treat the matter in all cases is to be guided by convenience. Thus (e.g.) it is said that the definition of phlegm is the 'undigested moisture that comes first off food'. Here the addition of the word 'undigested' is superfluous, seeing that 'the first' is one and not many, so that even when undigested' is left out the definition will still be peculiar to the subject: for it is impossible that both phlegm and also something else should both be the first to arise from the food. Or perhaps the phlegm is not absolutely the first thing to come off the food, but only the first of the undigested matters, so that the addition 'undigested' is required; for stated the other way the definition would not be true unless the phlegm comes first of all.

Moreover, see if anything contained in the definition fails to apply to everything that falls under the same species: for this sort of definition is worse than those which include an attribute belonging to all things universally. For in that case, if the remainder of the expression be peculiar, the whole too will be peculiar: for absolutely always, if to something peculiar anything whatever that is true be added, the whole too becomes peculiar. Whereas if any part of the expression do not apply to everything that falls under the same species, it is impossible that the expression as a whole should be peculiar: for it will not be predicated convertibly with the object; e.g. 'a walking biped animal six feet high': for an expression of that kind is not predicated convertibly with the term, because the attribute 'six feet high' does not belong to everything that falls under the same species.

Again, see if he has said the same thing more than once, saying (e.g.) 'desire' is a 'conation for the pleasant'. For 'desire' is always 'for the pleasant', so that what is the same as desire will also be 'for the pleasant'. Accordingly our definition of desire becomes 'conation-for-the-pleasant': for the word 'desire' is the exact equivalent of the words 'conation-for-the-pleasant', so that both alike will be 'for the pleasant'. Or perhaps there is no absurdity in this; for consider this instance: 'Man is a biped': therefore, what is the same as man is a biped: but 'a walking biped animal' is the same as man, and therefore walking biped animal is a biped'. But this involves no real absurdity. For 'biped' is not a predicate of 'walking animal': if it were, then we should certainly have 'biped' predicated twice of the same thing; but as a matter of fact the subject said to be a biped is'a walking

biped animal', so that the word 'biped' is only used as a predicate once. Likewise also in the case of 'desire' as well: for it is not 'conation' that is said to be 'for the pleasant', but rather the whole idea, so that there too the predication is only made once. Absurdity results, not when the same word is uttered twice, but when the same thing is more than once predicated of a subject; e.g. if he says, like Xenocrates, that wisdom defines and contemplates reality:' for definition is a certain type of contemplation, so that by adding the words 'and contemplates' over again he says the same thing twice over. Likewise, too, those fail who say that 'cooling' is 'the privation of natural heat'. For all privation is a privation of some natural attribute, so that the addition of the word 'natural' is superfluous: it would have been enough to say 'privation of heat', for the word 'privation' shows of itself that the heat meant is natural heat.

Again, see if a universal have been mentioned and then a particular case of it be added as well, e.g. 'Equity is a remission of what is expedient and just'; for what is just is a branch of what is expedient and is therefore included in the latter term: its mention is therefore redundant, an addition of the particular after the universal has been already stated. So also, if he defines 'medicine' as 'knowledge of what makes for health in animals and men', or 'the law' as 'the image of what is by nature noble and just'; for what is just is a branch of what is noble, so that he says the same thing more than once.

4

Whether, then, a man defines a thing correctly or incorrectly you should proceed to examine on these and similar lines. But whether he has mentioned and defined its essence or no, should be examined as follows: First of all, see if he has failed to make the definition through terms that are prior and more intelligible. For the reason why the definition is rendered is to make known the term stated, and we make things known by taking not any random terms, but such as are prior and more intelligible, as is done in demonstrations (for so it is with all teaching and learning); accordingly, it is clear that a man who does not define through terms of this kind has not defined at all. Otherwise, there will be more than one definition of the same thing: for clearly he who defines through terms that are prior and more intelligible has also framed a definition, and a better one, so that both would then be definitions of the same object. This sort of view, however, does not generally find acceptance: for of each real object the essence is single: if, then, there are to be a number of definitions of the same thing, the essence of the object will be the same as it is represented to be in each of the definitions, and these representations are not the same, inasmuch as the definitions are different. Clearly, then, any one who has not defined a thing through terms that are prior and more intelligible has not defined it at all.

The statement that a definition has not been made through more intelligible terms may be understood in two senses, either supposing that its terms are absolutely less intelligible, or supposing that they are less intelligible to us: for either sense is possible. Thus absolutely the prior is more intelligible than the posterior, a point, for instance, than a line, a line than a plane, and a plane than a solid; just as also a unit is more intelligible than a number; for it is the prius and starting-point of all number. Likewise, also, a letter is more intelligible than a syllable. Whereas to us it sometimes happens that the converse is the case: for the solid falls under perception most of all – more than a plane – and a plane more than a line, and a line more than a point; for most people learn things like the former earlier than the latter; for any ordinary intelligence can grasp them, whereas the others require an exact and exceptional understanding.

Absolutely, then, it is better to try to make what is posterior known through what is prior, inasmuch as such a way of procedure is more scientific. Of course, in dealing with persons who cannot

recognize things through terms of that kind, it may perhaps be necessary to frame the expression through terms that are intelligible to them. Among definitions of this kind are those of a point, a line, and a plane, all of which explain the prior by the posterior; for they say that a point is the limit of a line, a line of a plane, a plane of a solid. One must, however, not fail to observe that those who define in this way cannot show the essential nature of the term they define, unless it so happens that the same thing is more intelligible both to us and also absolutely, since a correct definition must define a thing through its genus and its differentiae, and these belong to the order of things which are absolutely more intelligible than, and prior to, the species. For annul the genus and differentia, and the species too is annulled, so that these are prior to the species. They are also more intelligible; for if the species be known, the genus and differentia must of necessity be known as well (for any one who knows what a man is knows also what 'animal' and 'walking' are), whereas if the genus or the differentia be known it does not follow of necessity that the species is known as well: thus the species is less intelligible. Moreover, those who say that such definitions, viz. those which proceed from what is intelligible to this, that, or the other man, are really and truly definitions, will have to say that there are several definitions of one and the same thing. For, as it happens, different things are more intelligible to different people, not the same things to all; and so a different definition would have to be rendered to each several person, if the definition is to be constructed from what is more intelligible to particular individuals. Moreover, to the same people different things are more intelligible at different times; first of all the objects of sense; then, as they become more sharpwitted, the converse; so that those who hold that a definition ought to be rendered through what is more intelligible to particular individuals would not have to render the same definition at all times even to the same person. It is clear, then, that the right way to define is not through terms of that kind, but through what is absolutely more intelligible: for only in this way could the definition come always to be one and the same. Perhaps, also, what is absolutely intelligible is what is intelligible, not to all, but to those who are in a sound state of understanding, just as what is absolutely healthy is what is healthy to those in a sound state of body. All such points as this ought to be made very precise, and made use of in the course of discussion as occasion requires. The demolition of a definition will most surely win a general approval if the definer happens to have framed his expression neither from what is absolutely more intelligible nor yet from what is so to us.

One form, then, of the failure to work through more intelligible terms is the exhibition of the prior through the posterior, as we remarked before.' Another form occurs if we find that the definition has been rendered of what is at rest and definite through what is indefinite and in motion: for what is still and definite is prior to what is indefinite and in motion.

Of the failure to use terms that are prior there are three forms:

(1) The first is when an opposite has been defined through its opposite, e.g.i. good through evil: for opposites are always simultaneous by nature. Some people think, also, that both are objects of the same science, so that the one is not even more intelligible than the other. One must, however, observe that it is perhaps not possible to define some things in any other way, e.g. the double without the half, and all the terms that are essentially relative: for in all such cases the essential being is the same as a certain relation to something, so that it is impossible to understand the one term without the other, and accordingly in the definition of the one the other too must be embraced. One ought to learn up all such points as these, and use them as occasion may seem to require.

(2) Another is – if he has used the term defined itself. This passes unobserved when the actual name of the object is not used, e.g. supposing any one had defined the sun as a star that appears by day'. For in bringing in 'day' he brings in the sun. To detect errors of this sort, exchange the word for its definition, e.g. the definition of 'day' as the 'passage of the sun over the earth'. Clearly, whoever

has said ‘the passage of the sun over the earth’ has said ‘the sun’, so that in bringing in the ‘day’ he has brought in the sun.
(3) Again, see if he has defined one coordinate member of a division by another, e.g. ‘an odd number’ as ‘that which is greater by one than an even number’. For the co-ordinate members of a division that are derived from the same genus are simultaneous by nature and ‘odd’ and ‘even’ are such terms: for both are differentiae of number.
Likewise also, see if he has defined a superior through a subordinate term, e.g. ‘An «even number» is «a number divisible into halves»‘, or ‘«the good» is a «state of virtue» ‘. For ‘half’ is derived from ‘two’, and ‘two’ is an even number: virtue also is a kind of good, so that the latter terms are subordinate to the former. Moreover, in using the subordinate term one is bound to use the other as well: for whoever employs the term ‘virtue’ employs the term ‘good’, seeing that virtue is a certain kind of good: likewise, also, whoever employs the term ‘half’ employs the term ‘even’, for to be ‘divided in half’ means to be divided into two, and two is even.

5
Generally speaking, then, one commonplace rule relates to the failure to frame the expression by means of terms that are prior and more intelligible: and of this the subdivisions are those specified above. A second is, see whether, though the object is in a genus, it has not been placed in a genus. This sort of error is always found where the essence of the object does not stand first in the expression, e.g. the definition of ‘body’ as ‘that which has three dimensions’, or the definition of ‘man’, supposing any one to give it, as ‘that which knows how to count’: for it is not stated what it is that has three dimensions, or what it is that knows how to count: whereas the genus is meant to indicate just this, and is submitted first of the terms in the definition.
Moreover, see if, while the term to be defined is used in relation to many things, he has failed to render it in relation to all of them; as (e.g.) if he define ‘grammar’ as the ‘knowledge how to write from dictation’: for he ought also to say that it is a knowledge how to read as well. For in rendering it as ‘knowledge of writing’ has no more defined it than by rendering it as ‘knowledge of reading’: neither in fact has succeeded, but only he who mentions both these things, since it is impossible that there should be more than one definition of the same thing. It is only, however, in some cases that what has been said corresponds to the actual state of things: in some it does not, e.g. all those terms which are not used essentially in relation to both things: as medicine is said to deal with the production of disease and health; for it is said essentially to do the latter, but the former only by accident: for it is absolutely alien to medicine to produce disease. Here, then, the man who renders medicine as relative to both of these things has not defined it any better than he who mentions the one only. In fact he has done it perhaps worse, for any one else besides the doctor is capable of producing disease.
Moreover, in a case where the term to be defined is used in relation to several things, see if he has rendered it as relative to the worse rather than to the better; for every form of knowledge and potentiality is generally thought to be relative to the best.
Again, if the thing in question be not placed in its own proper genus, one must examine it according to the elementary rules in regard to genera, as has been said before.’
Moreover, see if he uses language which transgresses the genera of the things he defines, defining, e.g. justice as a ‘state that produces equality’ or ‘distributes what is equal’: for by defining it so he passes outside the sphere of virtue, and so by leaving out the genus of justice he fails to express its essence: for the essence of a thing must in each case bring in its genus. It is the same thing if the object be not put into its nearest genus; for the man who puts it into the nearest one has stated all the

higher genera, seeing that all the higher genera are predicated of the lower. Either, then, it ought to be put into its nearest genus, or else to the higher genus all the differentiae ought to be appended whereby the nearest genus is defined. For then he would not have left out anything: but would merely have mentioned the subordinate genus by an expression instead of by name. On the other hand, he who mentions merely the higher genus by itself, does not state the subordinate genus as well: in saying ‘plant’ a man does not specify ‘a tree’.

6

Again, in regard to the differentiae, we must examine in like manner whether the differentiae, too, that he has stated be those of the genus. For if a man has not defined the object by the differentiae peculiar to it, or has mentioned something such as is utterly incapable of being a differentia of anything, e.g. ‘animal’ or ‘substance’, clearly he has not defined it at all: for the aforesaid terms do not differentiate anything at all. Further, we must see whether the differentia stated possesses anything that is co-ordinate with it in a division; for, if not, clearly the one stated could not be a differentia of the genus. For a genus is always divided by differentiae that are co-ordinate members of a division, as, for instance, by the terms ‘walking’, ‘flying’, ‘aquatic’, and ‘biped’. Or see if, though the contrasted differentia exists, it yet is not true of the genus, for then, clearly, neither of them could be a differentia of the genus; for differentiae that are co-ordinates in a division with the differentia of a thing are all true of the genus to which the thing belongs. Likewise, also, see if, though it be true, yet the addition of it to the genus fails to make a species. For then, clearly, this could not be a specific differentia of the genus: for a specific differentia, if added to the genus, always makes a species. If, however, this be no true differentia, no more is the one adduced, seeing that it is a co-ordinate member of a division with this.

Moreover, see if he divides the genus by a negation, as those do who define line as ‘length without breadth’: for this means simply that it has not any breadth. The genus will then be found to partake of its own species: for, since of everything either an affirmation or its negation is true, length must always either lack breadth or possess it, so that ‘length’ as well, i.e. the genus of ‘line’, will be either with or without breadth. But ‘length without breadth’ is the definition of a species, as also is ‘length with breadth’: for ‘without breadth’ and ‘with breadth’ are differentiae, and the genus and differentia constitute the definition of the species. Hence the genus would admit of the definition of its species. Likewise, also, it will admit of the definition of the differentia, seeing that one or the other of the aforesaid differentiae is of necessity predicated of the genus. The usefulness of this principle is found in meeting those who assert the existence of ‘Ideas’: for if absolute length exist, how will it be predicable of the genus that it has breadth or that it lacks it? For one assertion or the other will have to be true of ‘length’ universally, if it is to be true of the genus at all: and this is contrary to the fact: for there exist both lengths which have, and lengths which have not, breadth. Hence the only people against whom the rule can be employed are those who assert that a genus is always numerically one; and this is what is done by those who assert the real existence of the ‘Ideas’; for they allege that absolute length and absolute animal are the genus.

It may be that in some cases the definer is obliged to employ a negation as well, e.g. in defining privations. For ‘blind’ means a thing which cannot see when its nature is to see. There is no difference between dividing the genus by a negation, and dividing it by such an affirmation as is bound to have a negation as its co-ordinate in a division, e.g. supposing he had defined something as ‘length possessed of breadth’; for co-ordinate in the division with that which is possessed of breadth is that which possesses no breadth and that only, so that again the genus is divided by a negation.

Again, see if he rendered the species as a differentia, as do those who define ‘contumely’ as ‘insolence accompanied by jeering’; for jeering is a kind of insolence, i.e. it is a species and not a differentia.

Moreover, see if he has stated the genus as the differentia, e.g. ‘Virtue is a good or noble state: for ‘good’ is the genus of ‘virtue’. Or possibly ‘good’ here is not the genus but the differentia, on the principle that the same thing cannot be in two genera of which neither contains the other: for ‘good’ does not include ‘state’, nor vice versa: for not every state is good nor every good a ‘state’. Both, then, could not be genera, and consequently, if ‘state’ is the genus of virtue, clearly ‘good’ cannot be its genus: it must rather be the differentia’. Moreover, ‘a state’ indicates the essence of virtue, whereas ‘good’ indicates not the essence but a quality: and to indicate a quality is generally held to be the function of the differentia. See, further, whether the differentia rendered indicates an individual rather than a quality: for the general view is that the differentia always expresses a quality.

Look and see, further, whether the differentia belongs only by accident to the object defined. For the differentia is never an accidental attribute, any more than the genus is: for the differentia of a thing cannot both belong and not belong to it.

Moreover, if either the differentia or the species, or any of the things which are under the species, is predicable of the genus, then he could not have defined the term. For none of the aforesaid can possibly be predicated of the genus, seeing that the genus is the term with the widest range of all.

Again, see if the genus be predicated of the differentia; for the general view is that the genus is predicated, not of the differentia, but of the objects of which the differentia is predicated. Animal (e.g.) is predicated of ‘man’ or ‘ox’ or other walking animals, not of the actual differentia itself which we predicate of the species. For if ‘animal’ is to be predicated of each of its differentiae, then ‘animal’ would be predicated of the species several times over; for the differentiae are predicates of the species. Moreover, the differentiae will be all either species or individuals, if they are animals; for every animal is either a species or an individual.

Likewise you must inquire also if the species or any of the objects that come under it is predicated of the differentia: for this is impossible, seeing that the differentia is a term with a wider range than the various species. Moreover, if any of the species be predicated of it, the result will be that the differentia is a species: if, for instance, ‘man’ be predicated, the differentia is clearly the human race. Again, see if the differentia fails to be prior to the species: for the differentia ought to be posterior to the genus, but prior to the species.

Look and see also if the differentia mentioned belongs to a different genus, neither contained in nor containing the genus in question. For the general view is that the same differentia cannot be used of two non-subaltern genera. Else the result will be that the same species as well will be in two non-subaltern genera: for each of the differentiae imports its own genus, e.g. ‘walking’ and ‘biped’ import with them the genus ‘animal’. If, then, each of the genera as well is true of that of which the differentia is true, it clearly follows that the species must be in two non-subaltern genera. Or perhaps it is not impossible for the same differentia to be used of two non-subaltern genera, and we ought to add the words ‘except they both be subordinate members of the same genus’. Thus ‘walking animal’ and ‘flying animal’ are non-subaltern genera, and ‘biped’ is the differentia of both. The words ‘except they both be subordinate members of the same genus’ ought therefore to be added; for both these are subordinate to ‘animal’. From this possibility, that the same differentia may be used of two non-subaltern genera, it is clear also that there is no necessity for the differentia to carry with it the whole of the genus to which it belongs, but only the one or the other of its limbs together with the genera that are higher than this, as ‘biped’ carries with it either ‘flying’ or ‘walking animal’.

See, too, if he has rendered ‘existence in’ something as the differentia of a thing’s essence: for the general view is that locality cannot differentiate between one essence and another. Hence, too, people condemn those who divide animals by means of the terms ‘walking’ and ‘aquatic’, on the ground that ‘walking’ and ‘aquatic’ indicate mere locality. Or possibly in this case the censure is undeserved; for ‘aquatic’ does not mean ‘in’ anything; nor does it denote a locality, but a certain quality: for even if the thing be on the dry land, still it is aquatic: and likewise a land-animal, even though it be in the water, will still be a and not an aquatic-animal. But all the same, if ever the differentia does denote existence in something, clearly he will have made a bad mistake.

Again, see if he has rendered an affection as the differentia: for every affection, if intensified, subverts the essence of the thing, while the differentia is not of that kind: for the differentia is generally considered rather to preserve that which it differentiates; and it is absolutely impossible for a thing to exist without its own special differentia: for if there be no ‘walking’, there will be no ‘man’. In fact, we may lay down absolutely that a thing cannot have as its differentia anything in respect of which it is subject to alteration: for all things of that kind, if intensified, destroy its essence. If, then, a man has rendered any differentia of this kind, he has made a mistake: for we undergo absolutely no alteration in respect of our differentiae.

Again, see if he has failed to render the differentia of a relative term relatively to something else; for the differentiae of relative terms are themselves relative, as in the case also of knowledge. This is classed as speculative, practical and productive; and each of these denotes a relation: for it speculates upon something, and produces something and does something.

Look and see also if the definer renders each relative term relatively to its natural purpose: for while in some cases the particular relative term can be used in relation to its natural purpose only and to nothing else, some can be used in relation to something else as well. Thus sight can only be used for seeing, but a strigil can also be used to dip up water. Still, if any one were to define a strigil as an instrument for dipping water, he has made a mistake: for that is not its natural function. The definition of a thing’s natural function is ‘that for which it would be used by the prudent man, acting as such, and by the science that deals specially with that thing’.

Or see if, whenever a term happens to be used in a number of relations, he has failed to introduce it in its primary relation: e.g. by defining ‘wisdom’ as the virtue of ‘man’ or of the ‘soul,’ rather than of the ‘reasoning faculty’: for ‘wisdom’ is the virtue primarily of the reasoning faculty: for it is in virtue of this that both the man and his soul are said to be wise.

Moreover, if the thing of which the term defined has been stated to be an affection or disposition, or whatever it may be, be unable to admit it, the definer has made a mistake. For every disposition and every affection is formed naturally in that of which it is an affection or disposition, as knowledge, too, is formed in the soul, being a disposition of soul. Sometimes, however, people make bad mistakes in matters of this sort, e.g. all those who say that ‘sleep’ is a ‘failure of sensation’, or that ‘perplexity’ is a state of ‘equality between contrary reasonings’, or that ‘pain’ is a ‘violent disruption of parts that are naturally conjoined’. For sleep is not an attribute of sensation, whereas it ought to be, if it is a failure of sensation. Likewise, perplexity is not an attribute of opposite reasonings, nor pain of parts naturally conjoined: for then inanimate things will be in pain, since pain will be present in them. Similar in character, too, is the definition of ‘health’, say, as a ‘balance of hot and cold elements’: for then health will be necessarily exhibited by the hot and cold elements: for balance of anything is an attribute inherent in those things of which it is the balance, so that health would be an attribute of them. Moreover, people who define in this way put effect for cause, or cause for effect. For the disruption of parts naturally conjoined is not pain, but only a cause of pain: nor again is a failure of sensation sleep, but the one is the cause of the other: for either we go to sleep because sensation fails, or sensation fails because we go to sleep. Likewise

also an equality between contrary reasonings would be generally considered to be a cause of perplexity: for it is when we reflect on both sides of a question and find everything alike to be in keeping with either course that we are perplexed which of the two we are to do.

Moreover, with regard to all periods of time look and see whether there be any discrepancy between the differentia and the thing defined: e.g. supposing the ‘immortal’ to be defined as a ‘living thing immune at present from destruction’. For a living thing that is immune ‘at present’ from destruction will be immortal ‘at present’. Possibly, indeed, in this case this result does not follow, owing to the ambiguity of the words ‘immune at present from destruction’: for it may mean either that the thing has not been destroyed at present, or that it cannot be destroyed at present, or that at present it is such that it never can be destroyed. Whenever, then, we say that a living thing is at present immune from destruction, we mean that it is at present a living thing of such a kind as never to be destroyed: and this is equivalent to saying that it is immortal, so that it is not meant that it is immortal only at present. Still, if ever it does happen that what has been rendered according to the definition belongs in the present only or past, whereas what is meant by the word does not so belong, then the two could not be the same. So, then, this commonplace rule ought to be followed, as we have said.

7

You should look and see also whether the term being defined is applied in consideration of something other than the definition rendered. Suppose (e.g.) a definition of ‘justice’ as the ‘ability to distribute what is equal’. This would not be right, for ‘just’ describes rather the man who chooses, than the man who is able to distribute what is equal: so that justice could not be an ability to distribute what is equal: for then also the most just man would be the man with the most ability to distribute what is equal.

Moreover, see if the thing admits of degrees, whereas what is rendered according to the definition does not, or, vice versa, what is rendered according to the definition admits of degrees while the thing does not. For either both must admit them or else neither, if indeed what is rendered according to the definition is the same as the thing. Moreover, see if, while both of them admit of degrees, they yet do not both become greater together: e.g. suppose sexual love to be the desire for intercourse: for he who is more intensely in love has not a more intense desire for intercourse, so that both do not become intensified at once: they certainly should, however, had they been the same thing.

Moreover, suppose two things to be before you, see if the term to be defined applies more particularly to the one to which the content of the definition is less applicable. Take, for instance, the definition of ‘fire’ as the ‘body that consists of the most rarefied particles’. For ‘fire’ denotes flame rather than light, but flame is less the body that consists of the most rarefied particles than is light: whereas both ought to be more applicable to the same thing, if they had been the same. Again, see if the one expression applies alike to both the objects before you, while the other does not apply to both alike, but more particularly to one of them.

Moreover, see if he renders the definition relative to two things taken separately: thus, the beautiful’ is ‘what is pleasant to the eyes or to the ears»: or ‘the real’ is ‘what is capable of being acted upon or of acting’. For then the same thing will be both beautiful and not beautiful, and likewise will be both real and not real. For ‘pleasant to the ears’ will be the same as ‘beautiful’, so that ‘not pleasant to the ears’ will be the same as ‘not beautiful’: for of identical things the opposites, too, are identical, and the opposite of ‘beautiful’ is ‘not beautiful’, while of ‘pleasant to the ears’ the opposite is not pleasant to the cars’: clearly, then, ‘not pleasant to the ears’ is the same

thing as ‘not beautiful’. If, therefore, something be pleasant to the eyes but not to the ears, it will be both beautiful and not beautiful. In like manner we shall show also that the same thing is both real and unreal.
Moreover, of both genera and differentiae and all the other terms rendered in definitions you should frame definitions in lieu of the terms, and then see if there be any discrepancy between them.

8
If the term defined be relative, either in itself or in respect of its genus, see whether the definition fails to mention that to which the term, either in itself or in respect of its genus, is relative, e.g. if he has defined ‘knowledge’ as an ‘incontrovertible conception’ or ‘wishing’ as ‘painless conation’. For of everything relative the essence is relative to something else, seeing that the being of every relative term is identical with being in a certain relation to something. He ought, therefore, to have said that knowledge is ‘conception of a knowable’ and that wishing is ‘conation for a good’. Likewise, also, if he has defined ‘grammar’ as ‘knowledge of letters’: whereas in the definition there ought to be rendered either the thing to which the term itself is relative, or that, whatever it is, to which its genus is relative. Or see if a relative term has been described not in relation to its end, the end in anything being whatever is best in it or gives its purpose to the rest. Certainly it is what is best or final that should be stated, e.g. that desire is not for the pleasant but for pleasure: for this is our purpose in choosing what is pleasant as well.
Look and see also if that in relation to which he has rendered the term be a process or an activity: for nothing of that kind is an end, for the completion of the activity or process is the end rather than the process or activity itself. Or perhaps this rule is not true in all cases, for almost everybody prefers the present experience of pleasure to its cessation, so that they would count the activity as the end rather than its completion.
Again see in some cases if he has failed to distinguish the quantity or quality or place or other differentiae of an object; e.g. the quality and quantity of the honour the striving for which makes a man ambitious: for all men strive for honour, so that it is not enough to define the ambitious man as him who strives for honour, but the aforesaid differentiae must be added. Likewise, also, in defining the covetous man the quantity of money he aims at, or in the case of the incontinent man the quality of the pleasures, should be stated. For it is not the man who gives way to any sort of pleasure whatever who is called incontinent, but only he who gives way to a certain kind of pleasure. Or again, people sometimes define night as a ‘shadow on the earth’, or an earthquake as a movement of the earth’, or a cloud as ‘condensation of the air’, or a wind as a ‘movement of the air’; whereas they ought to specify as well quantity, quality, place, and cause. Likewise, also, in other cases of the kind: for by omitting any differentiae whatever he fails to state the essence of the term. One should always attack deficiency. For a movement of the earth does not constitute an earthquake, nor a movement of the air a wind, irrespective of its manner and the amount involved.
Moreover, in the case of conations, and in any other cases where it applies, see if the word ‘apparent’ is left out, e.g. ‘wishing is a conation after the good’, or ‘desire is a conation after the pleasant’ – instead of saying ‘the apparently good’, or ‘pleasant’. For often those who exhibit the conation do not perceive what is good or pleasant, so that their aim need not be really good or pleasant, but only apparently so. They ought, therefore, to have rendered the definition also accordingly. On the other hand, any one who maintains the existence of Ideas ought to be brought face to face with his Ideas, even though he does render the word in question: for there can be no Idea of anything merely apparent: the general view is that an Idea is always spoken of in relation to an Idea: thus absolute desire is for the absolutely pleasant, and absolute wishing is for the

absolutely good; they therefore cannot be for an apparent good or an apparently pleasant: for the existence of an absolutely – apparently – good or pleasant would be an absurdity.

9

Moreover, if the definition be of the state of anything, look at what is in the state, while if it be of what is in the state, look at the state: and likewise also in other cases of the kind. Thus if the pleasant be identical with the beneficial, then, too, the man who is pleased is benefited. Speaking generally, in definitions of this sort it happens that what the definer defines is in a sense more than one thing: for in defining knowledge, a man in a sense defines ignorance as well, and likewise also what has knowledge and what lacks it, and what it is to know and to be ignorant. For if the first be made clear, the others become in a certain sense clear as well. We have, then, to be on our guard in all such cases against discrepancy, using the elementary principles drawn from consideration of contraries and of coordinates.

Moreover, in the case of relative terms, see if the species is rendered as relative to a species of that to which the genus is rendered as relative, e.g. supposing belief to be relative to some object of belief, see whether a particular belief is made relative to some particular object of belief: and, if a multiple be relative to a fraction, see whether a particular multiple be made relative to a particular fraction. For if it be not so rendered, clearly a mistake has been made.

See, also, if the opposite of the term has the opposite definition, whether (e.g.) the definition of 'half' is the opposite of that of 'double': for if 'double' is 'that which exceeds another by an equal amount to that other', 'half' is 'that which is exceeded by an amount equal to itself'. In the same way, too, with contraries. For to the contrary term will apply the definition that is contrary in some one of the ways in which contraries are conjoined. Thus (e.g.) if 'useful'='productive of good', 'injurious'=productive of evil' or 'destructive of good', for one or the other of thee is bound to be contrary to the term originally used. Suppose, then, neither of these things to be the contrary of the term originally used, then clearly neither of the definitions rendered later could be the definition of the contrary of the term originally defined: and therefore the definition originally rendered of the original term has not been rightly rendered either. Seeing, moreover, that of contraries, the one is sometimes a word forced to denote the privation of the other, as (e.g.) inequality is generally held to be the privation of equality (for 'unequal' merely describes things that are not equal'), it is therefore clear that that contrary whose form denotes the privation must of necessity be defined through the other; whereas the other cannot then be defined through the one whose form denotes the privation; for else we should find that each is being interpreted by the other. We must in the case of contrary terms keep an eye on this mistake, e.g. supposing any one were to define equality as the contrary of inequality: for then he is defining it through the term which denotes privation of it. Moreover, a man who so defines is bound to use in his definition the very term he is defining; and this becomes clear, if for the word we substitute its definition. For to say 'inequality' is the same as to say 'privation of equality'. Therefore equality so defined will be 'the contrary of the privation of equality', so that he would have used the very word to be defined. Suppose, however, that neither of the contraries be so formed as to denote privation, but yet the definition of it be rendered in a manner like the above, e.g. suppose 'good' to be defined as 'the contrary of evil', then, since it is clear that 'evil' too will be 'the contrary of good' (for the definition of things that are contrary in this must be rendered in a like manner), the result again is that he uses the very term being defined: for 'good' is inherent in the definition of 'evil'. If, then, 'good' be the contrary of evil, and evil be nothing other than the 'contrary of good', then 'good' will be the 'contrary of the contrary of good'. Clearly, then, he has used the very word to be defined.

Moreover, see if in rendering a term formed to denote privation, he has failed to render the term of which it is the privation, e.g. the state, or contrary, or whatever it may be whose privation it is: also if he has omitted to add either any term at all in which the privation is naturally formed, or else that in which it is naturally formed primarily, e.g. whether in defining ‘ignorance’ a privation he has failed to say that it is the privation of ‘knowledge’; or has failed to add in what it is naturally formed, or, though he has added this, has failed to render the thing in which it is primarily formed, placing it (e.g.) in ‘man’ or in ‘the soul’, and not in the ‘reasoning faculty’: for if in any of these respects he fails, he has made a mistake. Likewise, also, if he has failed to say that ‘blindness’ is the ‘privation of sight in an eye’: for a proper rendering of its essence must state both of what it is the privation and what it is that is deprived.

Examine further whether he has defined by the expression ‘a privation’ a term that is not used to denote a privation: thus a mistake of this sort also would be generally thought to be incurred in the case of ‘error’ by any one who is not using it as a merely negative term. For what is generally thought to be in error is not that which has no knowledge, but rather that which has been deceived, and for this reason we do not talk of inanimate things or of children as ‘erring’. ‘Error’, then, is not used to denote a mere privation of knowledge.

10

Moreover, see whether the like inflexions in the definition apply to the like inflexions of the term; e.g. if ‘beneficial’ means ‘productive of health’, does ‘beneficially’ mean productively of health’ and a ‘benefactor’ a ‘producer of health’?

Look too and see whether the definition given will apply to the Idea as well. For in some cases it will not do so; e.g. in the Platonic definition where he adds the word ‘mortal’ in his definitions of living creatures: for the Idea (e.g. the absolute Man) is not mortal, so that the definition will not fit the Idea. So always wherever the words ‘capable of acting on’ or ‘capable of being acted upon’ are added, the definition and the Idea are absolutely bound to be discrepant: for those who assert the existence of Ideas hold that they are incapable of being acted upon, or of motion. In dealing with these people even arguments of this kind are useful.

Further, see if he has rendered a single common definition of terms that are used ambiguously. For terms whose definition corresponding their common name is one and the same, are synonymous; if, then, the definition applies in a like manner to the whole range of the ambiguous term, it is not true of any one of the objects described by the term. This is, moreover, what happens to Dionysius’ definition of ‘life’ when stated as ‘a movement of a creature sustained by nutriment, congenitally present with it’: for this is found in plants as much as in animals, whereas ‘life’ is generally understood to mean not one kind of thing only, but to be one thing in animals and another in plants. It is possible to hold the view that life is a synonymous term and is always used to describe one thing only, and therefore to render the definition in this way on purpose: or it may quite well happen that a man may see the ambiguous character of the word, and wish to render the definition of the one sense only, and yet fail to see that he has rendered a definition common to both senses instead of one peculiar to the sense he intends. In either case, whichever course he pursues, he is equally at fault. Since ambiguous terms sometimes pass unobserved, it is best in questioning to treat such terms as though they were synonymous (for the definition of the one sense will not apply to the other, so that the answerer will be generally thought not to have defined it correctly, for to a synonymous term the definition should apply in its full range), whereas in answering you should yourself distinguish between the senses. Further, as some answerers call ‘ambiguous’ what is really synonymous, whenever the definition rendered fails to apply universally, and, vice versa, call

synonymous what is really ambiguous supposing their definition applies to both senses of the term, one should secure a preliminary admission on such points, or else prove beforehand that so-and-so is ambiguous or synonymous, as the case may be: for people are more ready to agree when they do not foresee what the consequence will be. If, however, no admission has been made, and the man asserts that what is really synonymous is ambiguous because the definition he has rendered will not apply to the second sense as well, see if the definition of this second meaning applies also to the other meanings: for if so, this meaning must clearly be synonymous with those others. Otherwise, there will be more than one definition of those other meanings, for there are applicable to them two distinct definitions in explanation of the term, viz. the one previously rendered and also the later one. Again, if any one were to define a term used in several senses, and, finding that his definition does not apply to them all, were to contend not that the term is ambiguous, but that even the term does not properly apply to all those senses, just because his definition will not do so either, then one may retort to such a man that though in some things one must not use the language of the people, yet in a question of terminology one is bound to employ the received and traditional usage and not to upset matters of that sort.

11

Suppose now that a definition has been rendered of some complex term, take away the definition of one of the elements in the complex, and see if also the rest of the definition defines the rest of it: if not, it is clear that neither does the whole definition define the whole complex. Suppose, e.g. that some one has defined a ‘finite straight line’ as ‘the limit of a finite plane, such that its centre is in a line with its extremes’; if now the definition of a finite line’ be the ‘limit of a finite plane’, the rest (viz. ‘such that its centre is in a line with its extremes’) ought to be a definition of straight’. But an infinite straight line has neither centre nor extremes and yet is straight so that this remainder does not define the remainder of the term.

Moreover, if the term defined be a compound notion, see if the definition rendered be equimembral with the term defined. A definition is said to be equimembral with the term defined when the number of the elements compounded in the latter is the same as the number of nouns and verbs in the definition. For the exchange in such cases is bound to be merely one of term for term, in the case of some if not of all, seeing that there are no more terms used now than formerly; whereas in a definition terms ought to be rendered by phrases, if possible in every case, or if not, in the majority. For at that rate, simple objects too could be defined by merely calling them by a different name, e.g. ‘cloak’ instead of ‘doublet’.

The mistake is even worse, if actually a less well known term be substituted, e.g. ‘pellucid mortal’ for ‘white man’: for it is no definition, and moreover is less intelligible when put in that form.

Look and see also whether, in the exchange of words, the sense fails still to be the same. Take, for instance, the explanation of ‘speculative knowledge’ as ‘speculative conception’: for conception is not the same as knowledge – as it certainly ought to be if the whole is to be the same too: for though the word ‘speculative’ is common to both expressions, yet the remainder is different.

Moreover, see if in replacing one of the terms by something else he has exchanged the genus and not the differentia, as in the example just given: for ‘speculative’ is a less familiar term than knowledge; for the one is the genus and the other the differentia, and the genus is always the most familiar term of all; so that it is not this, but the differentia, that ought to have been changed, seeing that it is the less familiar. It might be held that this criticism is ridiculous: because there is no reason why the most familiar term should not describe the differentia, and not the genus; in which case, clearly, the term to be altered would also be that denoting the genus and not the differentia. If,

however, a man is substituting for a term not merely another term but a phrase, clearly it is of the differentia rather than of the genus that a definition should be rendered, seeing that the object of rendering the definition is to make the subject familiar; for the differentia is less familiar than the genus.

If he has rendered the definition of the differentia, see whether the definition rendered is common to it and something else as well: e.g. whenever he says that an odd number is a ‘number with a middle’, further definition is required of how it has a middle: for the word ‘number’ is common to both expressions, and it is the word ‘odd’ for which the phrase has been substituted. Now both a line and a body have a middle, yet they are not ‘odd’; so that this could not be a definition of ‘odd’. If, on the other hand, the phrase ‘with a middle’ be used in several senses, the sense here intended requires to be defined. So that this will either discredit the definition or prove that it is no definition at all.

12

Again, see if the term of which he renders the definition is a reality, whereas what is contained in the definition is not, e.g. Suppose ‘white’ to be defined as ‘colour mingled with fire’: for what is bodiless cannot be mingled with body, so that ‘colour’ ‘mingled with fire’ could not exist, whereas ‘white’ does exist.

Moreover, those who in the case of relative terms do not distinguish to what the object is related, but have described it only so as to include it among too large a number of things, are wrong either wholly or in part; e.g. suppose some one to have defined ‘medicine’ as a science of Reality’. For if medicine be not a science of anything that is real, the definition is clearly altogether false; while if it be a science of some real thing, but not of another, it is partly false; for it ought to hold of all reality, if it is said to be of Reality essentially and not accidentally: as is the case with other relative terms: for every object of knowledge is a term relative to knowledge: likewise, also, with other relative terms, inasmuch as all such are convertible. Moreover, if the right way to render account of a thing be to render it as it is not in itself but accidentally, then each and every relative term would be used in relation not to one thing but to a number of things. For there is no reason why the same thing should not be both real and white and good, so that it would be a correct rendering to render the object in relation to any one whatsoever of these, if to render what it is accidentally be a correct way to render it. It is, moreover, impossible that a definition of this sort should be peculiar to the term rendered: for not only but the majority of the other sciences too, have for their object some real thing, so that each will be a science of reality. Clearly, then, such a definition does not define any science at all; for a definition ought to be peculiar to its own term, not general.

Sometimes, again, people define not the thing but only the thing in a good or perfect condition. Such is the definition of a rhetorician as ‘one who can always see what will persuade in the given circumstances, and omit nothing’; or of a thief, as ‘one who pilfers in secret’: for clearly, if they each do this, then the one will be a good rhetorician, and the other a good thief: whereas it is not the actual pilfering in secret, but the wish to do it, that constitutes the thief.

Again, see if he has rendered what is desirable for its own sake as desirable for what it produces or does, or as in any way desirable because of something else, e.g. by saying that justice is ‘what preserves the laws’ or that wisdom is ‘what produces happiness’; for what produces or preserves something else is one of the things desirable for something else. It might be said that it is possible for what is desirable in itself to be desirable for something else as well: but still to define what is desirable in itself in such a way is none the less wrong: for the essence contains par excellence what

is best in anything, and it is better for a thing to be desirable in itself than to be desirable for something else, so that this is rather what the definition too ought to have indicated.

13

See also whether in defining anything a man has defined it as an ‘A and B’, or as a ‘product of A and B’ or as an ‘A+B’. If he defines it as and B’, the definition will be true of both and yet of neither of them; suppose, e.g. justice to be defined as ‘temperance and courage.’ For if of two persons each has one of the two only, both and yet neither will be just: for both together have justice, and yet each singly fails to have it. Even if the situation here described does not so far appear very absurd because of the occurrence of this kind of thing in other cases also (for it is quite possible for two men to have a mina between them, though neither of them has it by himself), yet least that they should have contrary attributes surely seems quite absurd; and yet this will follow if the one be temperate and yet a coward, and the other, though brave, be a profligate; for then both will exhibit both justice and injustice: for if justice be temperance and bravery, then injustice will be cowardice and profligacy. In general, too, all the ways of showing that the whole is not the same as the sum of its parts are useful in meeting the type just described; for a man who defines in this way seems to assert that the parts are the same as the whole. The arguments are particularly appropriate in cases where the process of putting the parts together is obvious, as in a house and other things of that sort: for there, clearly, you may have the parts and yet not have the whole, so that parts and whole cannot be the same.

If, however, he has said that the term being defined is not ‘A and B’ but the ‘product of A and B’, look and see in the first place if A and B cannot in the nature of things have a single product: for some things are so related to one another that nothing can come of them, e.g. a line and a number. Moreover, see if the term that has been defined is in the nature of things found primarily in some single subject, whereas the things which he has said produce it are not found primarily in any single subject, but each in a separate one. If so, clearly that term could not be the product of these things: for the whole is bound to be in the same things wherein its parts are, so that the whole will then be found primarily not in one subject only, but in a number of them. If, on the other hand, both parts and whole are found primarily in some single subject, see if that medium is not the same, but one thing in the case of the whole and another in that of the parts. Again, see whether the parts perish together with the whole: for it ought to happen, vice versa, that the whole perishes when the parts perish; when the whole perishes, there is no necessity that the parts should perish too. Or again, see if the whole be good or evil, and the parts neither, or, vice versa, if the parts be good or evil and the whole neither. For it is impossible either for a neutral thing to produce something good or bad, or for things good or bad to produce a neutral thing. Or again, see if the one thing is more distinctly good than the other is evil, and yet the product be no more good than evil, e.g. suppose shamelessness be defined as ‘the product of courage and false opinion’: here the goodness of courage exceeds the evil of false opinion; accordingly the product of these ought to have corresponded to this excess, and to be either good without qualification, or at least more good than evil. Or it may be that this does not necessarily follow, unless each be in itself good or bad; for many things that are productive are not good in themselves, but only in combination; or, per contra, they are good taken singly, and bad or neutral in combination. What has just been said is most clearly illustrated in the case of things that make for health or sickness; for some drugs are such that each taken alone is good, but if they are both administered in a mixture, bad.

Again, see whether the whole, as produced from a better and worse, fails to be worse than the better and better than the worse element. This again, however, need not necessarily be the case, unless the

elements compounded be in themselves good; if they are not, the whole may very well not be good, as in the cases just instanced.
Moreover, see if the whole be synonymous with one of the elements: for it ought not to be, any more than in the case of syllables: for the syllable is not synonymous with any of the letters of which it is made up.
Moreover, see if he has failed to state the manner of their composition: for the mere mention of its elements is not enough to make the thing intelligible. For the essence of any compound thing is not merely that it is a product of so-and-so, but that it is a product of them compounded in such and such a way, just as in the case of a house: for here the materials do not make a house irrespective of the way they are put together.
If a man has defined an object as 'A+B', the first thing to be said is that 'A+B' means the same either as 'A and B', or as the 'product of A and B.' for 'honey+water' means either the honey and the water, or the 'drink made of honey and water'. If, then, he admits that 'A+B' is + B' is the same as either of these two things, the same criticisms will apply as have already been given for meeting each of them. Moreover, distinguish between the different senses in which one thing may be said to be '+' another, and see if there is none of them in which A could be said to exist '+ B.' Thus e.g. supposing the expression to mean that they exist either in some identical thing capable of containing them (as e.g. justice and courage are found in the soul), or else in the same place or in the same time, and if this be in no way true of the A and B in question, clearly the definition rendered could not hold of anything, as there is no possible way in which A can exist B'. If, however, among the various senses above distinguished, it be true that A and B are each found in the same time as the other, look and see if possibly the two are not used in the same relation. Thus e.g. suppose courage to have been defined as 'daring with right reasoning': here it is possible that the person exhibits daring in robbery, and right reasoning in regard to the means of health: but he may have 'the former quality+the latter' at the same time, and not as yet be courageous! Moreover, even though both be used in the same relation as well, e.g. in relation to medical treatment (for a man may exhibit both daring and right reasoning in respect of medical treatment), still, none the less, not even this combination of 'the one+the other 'makes him 'courageous'. For the two must not relate to any casual object that is the same, any more than each to a different object; rather, they must relate to the function of courage, e.g. meeting the perils of war, or whatever is more properly speaking its function than this.
Some definitions rendered in this form fail to come under the aforesaid division at all, e.g. a definition of anger as 'pain with a consciousness of being slighted'. For what this means to say is that it is because of a consciousness of this sort that the pain occurs; but to occur 'because of' a thing is not the same as to occur '+ a thing' in any of its aforesaid senses.

14

Again, if he have described the whole compounded as the 'composition' of these things (e.g. 'a living creature' as a 'composition of soul and body'), first of all see whether he has omitted to state the kind of composition, as (e.g.) in a definition of 'flesh' or 'bone' as the 'composition of fire, earth, and air'. For it is not enough to say it is a composition, but you should also go on to define the kind of composition: for these things do not form flesh irrespective of the manner of their composition, but when compounded in one way they form flesh, when in another, bone. It appears, moreover, that neither of the aforesaid substances is the same as a 'composition' at all: for a composition always has a decomposition as its contrary, whereas neither of the aforesaid has any contrary. Moreover, if it is equally probable that every compound is a composition or else that none

is, and every kind of living creature, though a compound, is never a composition, then no other compound could be a composition either.
Again, if in the nature of a thing two contraries are equally liable to occur, and the thing has been defined through the one, clearly it has not been defined; else there will be more than one definition of the same thing; for how is it any more a definition to define it through this one than through the other, seeing that both alike are naturally liable to occur in it? Such is the definition of the soul, if defined as a substance capable of receiving knowledge: for it has a like capacity for receiving ignorance.
Also, even when one cannot attack the definition as a whole for lack of acquaintance with the whole, one should attack some part of it, if one knows that part and sees it to be incorrectly rendered: for if the part be demolished, so too is the whole definition. Where, again, a definition is obscure, one should first of all correct and reshape it in order to make some part of it clear and get a handle for attack, and then proceed to examine it. For the answerer is bound either to accept the sense as taken by the questioner, or else himself to explain clearly whatever it is that his definition means. Moreover, just as in the assemblies the ordinary practice is to move an emendation of the existing law and, if the emendation is better, they repeal the existing law, so one ought to do in the case of definitions as well: one ought oneself to propose a second definition: for if it is seen to be better, and more indicative of the object defined, clearly the definition already laid down will have been demolished, on the principle that there cannot be more than one definition of the same thing.
In combating definitions it is always one of the chief elementary principles to take by oneself a happy shot at a definition of the object before one, or to adopt some correctly expressed definition. For one is bound, with the model (as it were) before one's eyes, to discern both any shortcoming in any features that the definition ought to have, and also any superfluous addition, so that one is better supplied with lines of attack.
As to definitions, then, let so much suffice.

Book VII

1

Whether two things are 'the same' or 'different', in the most literal of the meanings ascribed to 'sameness' (and we said' that 'the same' applies in the most literal sense to what is numerically one), may be examined in the light of their inflexions and coordinates and opposites. For if justice be the same as courage, then too the just man is the same as the brave man, and 'justly' is the same as 'bravely'. Likewise, too, in the case of their opposites: for if two things be the same, their opposites also will be the same, in any of the recognized forms of opposition. For it is the same thing to take the opposite of the one or that of the other, seeing that they are the same. Again it may be examined in the light of those things which tend to produce or to destroy the things in question of their formation and destruction, and in general of any thing that is related in like manner to each. For where things are absolutely the same, their formations and destructions also are the same, and so are the things that tend to produce or to destroy them. Look and see also, in a case where one of two things is said to be something or other in a superlative degree, if the other of these alleged identical things can also be described by a superlative in the same respect. Thus Xenocrates argues that the happy life and the good life are the same, seeing that of all forms of life the good life is the most desirable and so also is the happy life: for 'the most desirable' and the greatest' apply but to

one thing.' Likewise also in other cases of the kind. Each, however, of the two things termed 'greatest' or most desirable' must be numerically one: otherwise no proof will have been given that they are the same; for it does not follow because Peloponnesians and Spartans are the bravest of the Greeks, that Peloponnesians are the same as Spartans, seeing that 'Peloponnesian' is not any one person nor yet 'Spartan'; it only follows that the one must be included under the other as 'Spartans' are under 'Peloponnesians': for otherwise, if the one class be not included under the other, each will be better than the other. For then the Peloponnesians are bound to be better than the Spartans, seeing that the one class is not included under the other; for they are better than anybody else. Likewise also the Spartans must perforce be better than the Peloponnesians; for they too are better than anybody else; each then is better than the other! Clearly therefore what is styled 'best' and 'greatest' must be a single thing, if it is to be proved to be 'the same' as another. This also is why Xenocrates fails to prove his case: for the happy life is not numerically single, nor yet the good life, so that it does not follow that, because they are both the most desirable, they are therefore the same, but only that the one falls under the other.

Again, look and see if, supposing the one to be the same as something, the other also is the same as it: for if they be not both the same as the same thing, clearly neither are they the same as one another.

Moreover, examine them in the light of their accidents or of the things of which they are accidents: for any accident belonging to the one must belong also to the other, and if the one belong to anything as an accident, so must the other also. If in any of these respects there is a discrepancy, clearly they are not the same.

See further whether, instead of both being found in one class of predicates, the one signifies a quality and the other a quantity or relation. Again, see if the genus of each be not the same, the one being 'good' and the other evil', or the one being 'virtue' and the other 'knowledge': or see if, though the genus is the same, the differentiae predicted of either be not the same, the one (e.g.) being distinguished as a 'speculative' science, the other as a 'practical' science. Likewise also in other cases.

Moreover, from the point of view of 'degrees', see if the one admits an increase of degree but not the other, or if though both admit it, they do not admit it at the same time; just as it is not the case that a man desires intercourse more intensely, the more intensely he is in love, so that love and the desire for intercourse are not the same.

Moreover, examine them by means of an addition, and see whether the addition of each to the same thing fails to make the same whole; or if the subtraction of the same thing from each leaves a different remainder. Suppose (e.g.) that he has declared 'double a half' to be the same as 'a multiple of a half': then, subtracting the words 'a half' from each, the remainders ought to have signified the same thing: but they do not; for 'double' and 'a multiple of' do not signify the same thing.

Inquire also not only if some impossible consequence results directly from the statement made, that A and B are the same, but also whether it is possible for a supposition to bring it about; as happens to those who assert that 'empty' is the same as 'full of air': for clearly if the air be exhausted, the vessel will not be less but more empty, though it will no longer be full of air. So that by a supposition, which may be true or may be false (it makes no difference which), the one character is annulled and not the other, showing that they are not the same.

Speaking generally, one ought to be on the look-out for any discrepancy anywhere in any sort of predicate of each term, and in the things of which they are predicated. For all that is predicated of the one should be predicated also of the other, and of whatever the one is a predicate, the other should be a predicate of it as well.

Moreover, as ‘sameness’ is a term used in many senses, see whether things that are the same in one way are the same also in a different way. For there is either no necessity or even no possibility that things that are the same specifically or generically should be numerically the same, and it is with the question whether they are or are not the same in that sense that we are concerned.
Moreover, see whether the one can exist without the other; for, if so, they could not be the same.

2
Such is the number of the commonplace rules that relate to ‘sameness’. It is clear from what has been said that all the destructive commonplaces relating to sameness are useful also in questions of definition, as was said before:’ for if what is signified by the term and by the expression be not the same, clearly the expression rendered could not be a definition. None of the constructive commonplaces, on the other hand, helps in the matter of definition; for it is not enough to show the sameness of content between the expression and the term, in order to establish that the former is a definition, but a definition must have also all the other characters already announced.

3
This then is the way, and these the arguments, whereby the attempt to demolish a definition should always be made. If, on the other hand, we desire to establish one, the first thing to observe is that few if any who engage in discussion arrive at a definition by reasoning: they always assume something of the kind as their starting points – both in geometry and in arithmetic and the other studies of that kind. In the second place, to say accurately what a definition is, and how it should be given, belongs to another inquiry. At present it concerns us only so far as is required for our present purpose, and accordingly we need only make the bare statement that to reason to a thing’s definition and essence is quite possible. For if a definition is an expression signifying the essence of the thing and the predicates contained therein ought also to be the only ones which are predicated of the thing in the category of essence; and genera and differentiae are so predicated in that category: it is obvious that if one were to get an admission that so and so are the only attributes predicated in that category, the expression containing so and so would of necessity be a definition; for it is impossible that anything else should be a definition, seeing that there is not anything else predicated of the thing in the category of essence.
That a definition may thus be reached by a process of reasoning is obvious. The means whereby it should be established have been more precisely defined elsewhere, but for the purposes of the inquiry now before us the same commonplace rules serve. For we have to examine into the contraries and other opposites of the thing, surveying the expressions used both as wholes and in detail: for if the opposite definition defines that opposite term, the definition given must of necessity be that of the term before us. Seeing, however, that contraries may be conjoined in more than one way, we have to select from those contraries the one whose contrary definition seems most obvious. The expressions, then, have to be examined each as a whole in the way we have said, and also in detail as follows. First of all, see that the genus rendered is correctly rendered; for if the contrary thing be found in the contrary genus to that stated in the definition, and the thing before you is not in that same genus, then it would clearly be in the contrary genus: for contraries must of necessity be either in the same genus or in contrary genera. The differentiae, too, that are predicated of contraries we expect to be contrary, e.g. those of white and black, for the one tends to pierce the vision, while the other tends to compress it. So that if contrary differentiae to those in the definition are predicated of the contrary term, then those rendered in the definition would be predicated of the

term before us. Seeing, then, that both the genus and the differentiae have been rightly rendered, clearly the expression given must be the right definition. It might be replied that there is no necessity why contrary differentiae should be predicated of contraries, unless the contraries be found within the same genus: of things whose genera are themselves contraries it may very well be that the same differentia is used of both, e.g. of justice and injustice; for the one is a virtue and the other a vice of the soul: 'of the soul', therefore, is the differentia in both cases, seeing that the body as well has its virtue and vice. But this much at least is true, that the differentiae of contraries are either contrary or else the same. If, then, the contrary differentia to that given be predicated of the contrary term and not of the one in hand, clearly the differentia stated must be predicated of the latter. Speaking generally, seeing that the definition consists of genus and differentiae, if the definition of the contrary term be apparent, the definition of the term before you will be apparent also: for since its contrary is found either in the same genus or in the contrary genus, and likewise also the differentiae predicated of opposites are either contrary to, or the same as, each other, clearly of the term before you there will be predicated either the same genus as of its contrary, while, of its differentiae, either all are contrary to those of its contrary, or at least some of them are so while the rest remain the same; or, vice versa, the differentiae will be the same and the genera contrary; or both genera and differentiae will be contrary. And that is all; for that both should be the same is not possible; else contraries will have the same definition.

Moreover, look at it from the point of view of its inflexions and coordinates. For genera and definitions are bound to correspond in either case. Thus if forgetfulness be the loss of knowledge, to forget is to lose knowledge, and to have forgotten is to have lost knowledge. If, then, any one whatever of these is agreed to, the others must of necessity be agreed to as well. Likewise, also, if destruction is the decomposition of the thing's essence, then to be destroyed is to have its essence decomposed, and 'destructively' means 'in such a way as to decompose its essence'; if again 'destructive' means 'apt to decompose something's essence', then also 'destruction' means 'the decomposition of its essence'. Likewise also with the rest: an admission of any one of them whatever, and all the rest are admitted too.

Moreover, look at it from the point of view of things that stand in relations that are like each other. For if 'healthy' means 'productive of health', 'vigorous' too will mean 'productive of vigour', and 'useful' will mean 'productive of good.' For each of these things is related in like manner to its own peculiar end, so that if one of them is defined as 'productive of' that end, this will also be the definition of each of the rest as well.

Moreover, look at it from the point of and like degrees, in all the ways in which it is possible to establish a result by comparing two and two together. Thus if A defines a better than B defines and B is a definition of so too is A of a. Further, if A's claim to define a is like B's to define B, and B defines B, then A too defines a. This examination from the point of view of greater degrees is of no use when a single definition is compared with two things, or two definitions with one thing; for there cannot possibly be one definition of two things or two of the same thing.

4

The most handy of all the commonplace arguments are those just mentioned and those from co-ordinates and inflexions, and these therefore are those which it is most important to master and to have ready to hand: for they are the most useful on the greatest number of occasions. Of the rest, too, the most important are those of most general application: for these are the most effective, e.g. that you should examine the individual cases, and then look to see in the case of their various species whether the definition applies. For the species is synonymous with its individuals. This sort

of inquiry is of service against those who assume the existence of Ideas, as has been said before.' Moreover see if a man has used a term metaphorically, or predicated it of itself as though it were something different. So too if any other of the commonplace rules is of general application and effective, it should be employed.

5

That it is more difficult to establish than to overthrow a definition, is obvious from considerations presently to be urged. For to see for oneself, and to secure from those whom one is questioning, an admission of premisses of this sort is no simple matter, e.g. that of the elements of the definition rendered the one is genus and the other differentia, and that only the genus and differentiae are predicated in the category of essence. Yet without these premisses it is impossible to reason to a definition; for if any other things as well are predicated of the thing in the category of essence, there is no telling whether the formula stated or some other one is its definition, for a definition is an expression indicating the essence of a thing. The point is clear also from the following: It is easier to draw one conclusion than many. Now in demolishing a definition it is sufficient to argue against one point only (for if we have overthrown any single point whatsoever, we shall have demolished the definition); whereas in establishing a definition, one is bound to bring people to the view that everything contained in the definition is attributable. Moreover, in establishing a case, the reasoning brought forward must be universal: for the definition put forward must be predicated of everything of which the term is predicated, and must moreover be convertible, if the definition rendered is to be peculiar to the subject. In overthrowing a view, on the other hand, there is no longer any necessity to show one's point universally: for it is enough to show that the formula is untrue of any one of the things embraced under the term.

Further, even supposing it should be necessary to overthrow something by a universal proposition, not even so is there any need to prove the converse of the proposition in the process of overthrowing the definition. For merely to show that the definition fails to be predicated of every one of the things of which the term is predicated, is enough to overthrow it universally: and there is no need to prove the converse of this in order to show that the term is predicated of things of which the expression is not predicated. Moreover, even if it applies to everything embraced under the term, but not to it alone, the definition is thereby demolished.

The case stands likewise in regard to the property and genus of a term also. For in both cases it is easier to overthrow than to establish. As regards the property this is clear from what has been said: for as a rule the property is rendered in a complex phrase, so that to overthrow it, it is only necessary to demolish one of the terms used, whereas to establish it is necessary to reason to them all. Then, too, nearly all the other rules that apply to the definition will apply also to the property of a thing. For in establishing a property one has to show that it is true of everything included under the term in question, whereas to overthrow one it is enough to show in a single case only that it fails to belong: further, even if it belongs to everything falling under the term, but not to that only, it is overthrown in this case as well, as was explained in the case of the definition. In regard to the genus, it is clear that you are bound to establish it in one way only, viz. by showing that it belongs in every case, while of overthrowing it there are two ways: for if it has been shown that it belongs either never or not in a certain case, the original statement has been demolished. Moreover, in establishing a genus it is not enough to show that it belongs, but also that it belongs as genus has to be shown; whereas in overthrowing it, it is enough to show its failure to belong either in some particular case or in every case. It appears, in fact, as though, just as in other things to destroy is easier than to create, so in these matters too to overthrow is easier than to establish.

In the case of an accidental attribute the universal proposition is easier to overthrow than to establish; for to establish it, one has to show that it belongs in every case, whereas to overthrow it, it is enough to show that it does not belong in one single case. The particular proposition is, on the contrary, easier to establish than to overthrow: for to establish it, it is enough to show that it belongs in a particular instance, whereas to overthrow it, it has to be shown that it never belongs at all.
It is clear also that the easiest thing of all is to overthrow a definition. For on account of the number of statements involved we are presented in the definition with the greatest number of points for attack, and the more plentiful the material, the quicker an argument comes: for there is more likelihood of a mistake occurring in a large than in a small number of things. Moreover, the other rules too may be used as means for attacking a definition: for if either the formula be not peculiar, or the genus rendered be the wrong one, or something included in the formula fail to belong, the definition is thereby demolished. On the other hand, against the others we cannot bring all of the arguments drawn from definitions, nor yet of the rest: for only those relating to accidental attributes apply generally to all the aforesaid kinds of attribute. For while each of the aforesaid kinds of attribute must belong to the thing in question, yet the genus may very well not belong as a property without as yet being thereby demolished. Likewise also the property need not belong as a genus, nor the accident as a genus or property, so long as they do belong. So that it is impossible to use one set as a basis of attack upon the other except in the case of definition. Clearly, then, it is the easiest of all things to demolish a definition, while to establish one is the hardest. For there one both has to establish all those other points by reasoning (i.e. that the attributes stated belong, and that the genus rendered is the true genus, and that the formula is peculiar to the term), and moreover, besides this, that the formula indicates the essence of the thing; and this has to be done correctly.
Of the rest, the property is most nearly of this kind: for it is easier to demolish, because as a rule it contains several terms; while it is the hardest to establish, both because of the number of things that people must be brought to accept, and, besides this, because it belongs to its subject alone and is predicated convertibly with its subject.
The easiest thing of all to establish is an accidental predicate: for in other cases one has to show not only that the predicate belongs, but also that it belongs in such and such a particular way: whereas in the case of the accident it is enough to show merely that it belongs. On the other hand, an accidental predicate is the hardest thing to overthrow, because it affords the least material: for in stating accident a man does not add how the predicate belongs; and accordingly, while in other cases it is possible to demolish what is said in two ways, by showing either that the predicate does not belong, or that it does not belong in the particular way stated, in the case of an accidental predicate the only way to demolish it is to show that it does not belong at all.
The commonplace arguments through which we shall be well supplied with lines of argument with regard to our several problems have now been enumerated at about sufficient length.

Book VIII

1

Next there fall to be discussed the problems of arrangement and method in pitting questions. Any one who intends to frame questions must, first of all, select the ground from which he should make his attack; secondly, he must frame them and arrange them one by one to himself; thirdly and lastly, he must proceed actually to put them to the other party. Now so far as the selection of his ground is

concerned the problem is one alike for the philosopher and the dialectician; but how to go on to arrange his points and frame his questions concerns the dialectician only: for in every problem of that kind a reference to another party is involved. Not so with the philosopher, and the man who is investigating by himself: the premisses of his reasoning, although true and familiar, may be refused by the answerer because they lie too near the original statement and so he foresees what will follow if he grants them: but for this the philosopher does not care. Nay, he may possibly be even anxious to secure axioms as familiar and as near to the question in hand as possible: for these are the bases on which scientific reasonings are built up.

The sources from which one's commonplace arguments should be drawn have already been described:' we have now to discuss the arrangement and formation of questions and first to distinguish the premisses, other than the necessary premisses, which have to be adopted. By necessary premisses are meant those through which the actual reasoning is constructed. Those which are secured other than these are of four kinds; they serve either inductively to secure the universal premiss being granted, or to lend weight to the argument, or to conceal the conclusion, or to render the argument more clear. Beside these there is no other premiss which need be secured: these are the ones whereby you should try to multiply and formulate your questions. Those which are used to conceal the conclusion serve a controversial purpose only; but inasmuch as an undertaking of this sort is always conducted against another person, we are obliged to employ them as well.

The necessary premisses through which the reasoning is effected, ought not to be propounded directly in so many words. Rather one should soar as far aloof from them as possible. Thus if one desires to secure an admission that the knowledge of contraries is one, one should ask him to admit it not of contraries, but of opposites: for, if he grants this, one will then argue that the knowledge of contraries is also the same, seeing that contraries are opposites; if he does not, one should secure the admission by induction, by formulating a proposition to that effect in the case of some particular pair of contraries. For one must secure the necessary premisses either by reasoning or by induction, or else partly by one and partly by the other, although any propositions which are too obvious to be denied may be formulated in so many words. This is because the coming conclusion is less easily discerned at the greater distance and in the process of induction, while at the same time, even if one cannot reach the required premisses in this way, it is still open to one to formulate them in so many words. The premisses, other than these, that were mentioned above, must be secured with a view to the latter. The way to employ them respectively is as follows: Induction should proceed from individual cases to the universal and from the known to the unknown; and the objects of perception are better known, to most people if not invariably. Concealment of one's plan is obtained by securing through prosyllogisms the premisses through which the proof of the original proposition is going to be constructed – and as many of them as possible. This is likely to be effected by making syllogisms to prove not only the necessary premisses but also some of those which are required to establish them. Moreover, do not state the conclusions of these premisses but draw them later one after another; for this is likely to keep the answerer at the greatest possible distance from the original proposition. Speaking generally, a man who desires to get information by a concealed method should so put his questions that when he has put his whole argument and has stated the conclusion, people still ask 'Well, but why is that?' This result will be secured best of all by the method above described: for if one states only the final conclusion, it is unclear how it comes about; for the answerer does not foresee on what grounds it is based, because the previous syllogisms have not been made articulate to him: while the final syllogism, showing the conclusion, is likely to be kept least articulate if we lay down not the secured propositions on which it is based, but only the grounds on which we reason to them.

It is a useful rule, too, not to secure the admissions claimed as the bases of the syllogisms in their proper order, but alternately those that conduce to one conclusion and those that conduce to another; for, if those which go together are set side by side, the conclusion that will result from them is more obvious in advance.

One should also, wherever possible, secure the universal premiss by a definition relating not to the precise terms themselves but to their co-ordinates; for people deceive themselves, whenever the definition is taken in regard to a co-ordinate, into thinking that they are not making the admission universally. An instance would be, supposing one had to secure the admission that the angry man desires vengeance on account of an apparent slight, and were to secure this, that 'anger' is a desire for vengeance on account of an apparent slight: for, clearly, if this were secured, we should have universally what we intend. If, on the other hand, people formulate propositions relating to the actual terms themselves, they often find that the answerer refuses to grant them because on the actual term itself he is readier with his objection, e.g. that the 'angry man' does not desire vengeance, because we become angry with our parents, but we do not desire vengeance on them. Very likely the objection is not valid; for upon some people it is vengeance enough to cause them pain and make them sorry; but still it gives a certain plausibility and air of reasonableness to the denial of the proposition. In the case, however, of the definition of 'anger' it is not so easy to find an objection.

Moreover, formulate your proposition as though you did so not for its own sake, but in order to get at something else: for people are shy of granting what an opponent's case really requires. Speaking generally, a questioner should leave it as far as possible doubtful whether he wishes to secure an admission of his proposition or of its opposite: for if it be uncertain what their opponent's argument requires, people are more ready to say what they themselves think.

Moreover, try to secure admissions by means of likeness: for such admissions are plausible, and the universal involved is less patent; e.g. make the other person admit that as knowledge and ignorance of contraries is the same, so too perception of contraries is the same; or vice versa, that since the perception is the same, so is the knowledge also. This argument resembles induction, but is not the same thing; for in induction it is the universal whose admission is secured from the particulars, whereas in arguments from likeness, what is secured is not the universal under which all the like cases fall.

It is a good rule also, occasionally to bring an objection against oneself: for answerers are put off their guard against those who appear to be arguing impartially. It is useful too, to add that 'So and so is generally held or commonly said'; for people are shy of upsetting the received opinion unless they have some positive objection to urge: and at the same time they are cautious about upsetting such things because they themselves too find them useful. Moreover, do not be insistent, even though you really require the point: for insistence always arouses the more opposition. Further, formulate your premiss as though it were a mere illustration: for people admit the more readily a proposition made to serve some other purpose, and not required on its own account. Moreover, do not formulate the very proposition you need to secure, but rather something from which that necessarily follows: for people are more willing to admit the latter, because it is not so clear from this what the result will be, and if the one has been secured, the other has been secured also. Again, one should put last the point which one most wishes to have conceded; for people are specially inclined to deny the first questions put to them, because most people in asking questions put first the points which they are most eager to secure. On the other hand, in dealing with some people propositions of this sort should be put forward first: for ill-tempered men admit most readily what comes first, unless the conclusion that will result actually stares them in the face, while at the close of an argument they show their ill-temper. Likewise also with those who consider themselves smart

at answering: for when they have admitted most of what you want they finally talk clap-trap to the effect that the conclusion does not follow from their admissions: yet they say ‘Yes’ readily, confident in their own character, and imagining that they cannot suffer any reverse. Moreover, it is well to expand the argument and insert things that it does not require at all, as do those who draw false geometrical figures: for in the multitude of details the whereabouts of the fallacy is obscured. For this reason also a questioner sometimes evades observation as he adds in a corner what, if he formulated it by itself, would not be granted.

For concealment, then, the rules which should be followed are the above. Ornament is attained by induction and distinction of things closely akin. What sort of process induction is obvious: as for distinction, an instance of the kind of thing meant is the distinction of one form of knowledge as better than another by being either more accurate, or concerned with better objects; or the distinction of sciences into speculative, practical, and productive. For everything of this kind lends additional ornament to the argument, though there is no necessity to say them, so far as the conclusion goes.

For clearness, examples and comparisons should be adduced, and let the illustrations be relevant and drawn from things that we know, as in Homer and not as in Choerilus; for then the proposition is likely to become clearer.

2

In dialectics, syllogism should be employed in reasoning against dialecticians rather than against the crowd: induction, on the other hand, is most useful against the crowd. This point has been treated previously as well.’ In induction, it is possible in some cases to ask the question in its universal form, but in others this is not easy, because there is no established general term that covers all the resemblances: in this case, when people need to secure the universal, they use the phrase ‘in all cases of this sort’. But it is one of the very hardest things to distinguish which of the things adduced are ‘of this sort’, and which are not: and in this connexion people often throw dust in each others’ eyes in their discussion, the one party asserting the likeness of things that are not alike, and the other disputing the likeness of things that are. One ought, therefore, to try oneself to coin a word to cover all things of the given sort, so as to leave no opportunity either to the answerer to dispute, and say that the thing advanced does not answer to a like description, or to the questioner to suggest falsely that it does answer to a like description, for many things appear to answer to like descriptions that do not really do so.

If one has made an induction on the strength of several cases and yet the answerer refuses to grant the universal proposition, then it is fair to demand his objection. But until one has oneself stated in what cases it is so, it is not fair to demand that he shall say in what cases it is not so: for one should make the induction first, and then demand the objection. One ought, moreover, to claim that the objections should not be brought in reference to the actual subject of the proposition, unless that subject happen to be the one and only thing of the kind, as for instance two is the one prime number among the even numbers: for, unless he can say that this subject is unique of its kind, the objector ought to make his objection in regard to some other. People sometimes object to a universal proposition, and bring their objection not in regard to the thing itself, but in regard to some homonym of it: thus they argue that a man can very well have a colour or a foot or a hand other than his own, for a painter may have a colour that is not his own, and a cook may have a foot that is not his own. To meet them, therefore, you should draw the distinction before putting your question in such cases: for so long as the ambiguity remains undetected, so long will the objection to the proposition be deemed valid. If, however, he checks the series of questions by an objection in

regard not to some homonym, but to the actual thing asserted, the questioner should withdraw the point objected to, and form the remainder into a universal proposition, until he secures what he requires; e.g. in the case of forgetfulness and having forgotten: for people refuse to admit that the man who has lost his knowledge of a thing has forgotten it, because if the thing alters, he has lost knowledge of it, but he has not forgotten it. Accordingly the thing to do is to withdraw the part objected to, and assert the remainder, e.g. that if a person have lost knowledge of a thing while it still remains, he then has forgotten it. One should similarly treat those who object to the statement that 'the greater the good, the greater the evil that is its opposite': for they allege that health, which is a less good thing than vigour, has a greater evil as its opposite: for disease is a greater evil than debility. In this case too, therefore, we have to withdraw the point objected to; for when it has been withdrawn, the man is more likely to admit the proposition, e.g. that 'the greater good has the greater evil as its opposite, unless the one good involves the other as well', as vigour involves health. This should be done not only when he formulates an objection, but also if, without so doing, he refuses to admit the point because he foresees something of the kind: for if the point objected to be withdrawn, he will be forced to admit the proposition because he cannot foresee in the rest of it any case where it does not hold true: if he refuse to admit it, then when asked for an objection he certainly will be unable to render one. Propositions that are partly false and partly true are of this type: for in the case of these it is possible by withdrawing a part to leave the rest true. If, however, you formulate the proposition on the strength of many cases and he has no objection to bring, you may claim that he shall admit it: for a premiss is valid in dialectics which thus holds in several instances and to which no objection is forthcoming.

Whenever it is possible to reason to the same conclusion either through or without a reduction per impossibile, if one is demonstrating and not arguing dialectically it makes no difference which method of reasoning be adopted, but in argument with another reasoning per impossibile should be avoided. For where one has reasoned without the reduction per impossibile, no dispute can arise; if, on the other hand, one does reason to an impossible conclusion, unless its falsehood is too plainly manifest, people deny that it is impossible, so that the questioners do not get what they want.

One should put forward all propositions that hold true of several cases, and to which either no objection whatever appears or at least not any on the surface: for when people cannot see any case in which it is not so, they admit it for true.

The conclusion should not be put in the form of a question; if it be, and the man shakes his head, it looks as if the reasoning had failed. For often, even if it be not put as a question but advanced as a consequence, people deny it, and then those who do not see that it follows upon the previous admissions do not realize that those who deny it have been refuted: when, then, the one man merely asks it as a question without even saying that it so follows, and the other denies it, it looks altogether as if the reasoning had failed.

Not every universal question can form a dialectical proposition as ordinarily understood, e.g. 'What is man?' or 'How many meanings has «the good»?' For a dialectical premiss must be of a form to which it is possible to reply 'Yes' or 'No', whereas to the aforesaid it is not possible. For this reason questions of this kind are not dialectical unless the questioner himself draws distinctions or divisions before expressing them, e.g. 'Good means this, or this, does it not?' For questions of this sort are easily answered by a Yes or a No. Hence one should endeavour to formulate propositions of this kind in this form. It is at the same time also perhaps fair to ask the other man how many meanings of 'the good' there are, whenever you have yourself distinguished and formulated them, and he will not admit them at all.

Any one who keeps on asking one thing for a long time is a bad inquirer. For if he does so though the person questioned keeps on answering the questions, clearly he asks a large number of

questions, or else asks the same question a large number of times: in the one case he merely babbles, in the other he fails to reason: for reasoning always consists of a small number of premisses. If, on the other hand, he does it because the person questioned does not answer the questions, he is at fault in not taking him to task or breaking off the discussion.

3

There are certain hypotheses upon which it is at once difficult to bring, and easy to stand up to, an argument. Such (e.g.) are those things which stand first and those which stand last in the order of nature. For the former require definition, while the latter have to be arrived at through many steps if one wishes to secure a continuous proof from first principles, or else all discussion about them wears the air of mere sophistry: for to prove anything is impossible unless one begins with the appropriate principles, and connects inference with inference till the last are reached. Now to define first principles is just what answerers do not care to do, nor do they pay any attention if the questioner makes a definition: and yet until it is clear what it is that is proposed, it is not easy to discuss it. This sort of thing happens particularly in the case of the first principles: for while the other propositions are shown through these, these cannot be shown through anything else: we are obliged to understand every item of that sort by a definition. The inferences, too, that lie too close to the first principle are hard to treat in argument: for it is not possible to bring many arguments in regard to them, because of the small number of those steps, between the conclusion and the principle, whereby the succeeding propositions have to be shown. The hardest, however, of all definitions to treat in argument are those that employ terms about which, in the first place, it is uncertain whether they are used in one sense or several, and, further, whether they are used literally or metaphorically by the definer. For because of their obscurity, it is impossible to argue upon such terms; and because of the impossibility of saying whether this obscurity is due to their being used metaphorically, it is impossible to refute them.

In general, it is safe to suppose that, whenever any problem proves intractable, it either needs definition or else bears either several senses, or a metaphorical sense, or it is not far removed from the first principles; or else the reason is that we have yet to discover in the first place just this – in which of the aforesaid directions the source of our difficulty lies: when we have made this clear, then obviously our business must be either to define or to distinguish, or to supply the intermediate premisses: for it is through these that the final conclusions are shown.

It often happens that a difficulty is found in discussing or arguing a given position because the definition has not been correctly rendered: e.g. ‘Has one thing one contrary or many?’: here when the term ‘contraries’ has been properly defined, it is easy to bring people to see whether it is possible for the same thing to have several contraries or not: in the same way also with other terms requiring definition. It appears also in mathematics that the difficulty in using a figure is sometimes due to a defect in definition; e.g. in proving that the line which cuts the plane parallel to one side divides similarly both the line which it cuts and the area; whereas if the definition be given, the fact asserted becomes immediately clear: for the areas have the same fraction subtracted from them as have the sides: and this is the definition of ‘the same ratio’. The most primary of the elementary principles are without exception very easy to show, if the definitions involved, e.g. the nature of a line or of a circle, be laid down; only the arguments that can be brought in regard to each of them are not many, because there are not many intermediate steps. If, on the other hand, the definition of the starting-points be not laid down, to show them is difficult and may even prove quite impossible. The case of the significance of verbal expressions is like that of these mathematical conceptions.

One may be sure then, whenever a position is hard to discuss, that one or other of the aforesaid things has happened to it. Whenever, on the other hand, it is a harder task to argue to the point claimed, i.e. the premiss, than to the resulting position, a doubt may arise whether such claims should be admitted or not: for if a man is going to refuse to admit it and claim that you shall argue to it as well, he will be giving the signal for a harder undertaking than was originally proposed: if, on the other hand, he grants it, he will be giving the original thesis credence on the strength of what is less credible than itself. If, then, it is essential not to enhance the difficulty of the problem, he had better grant it; if, on the other hand, it be essential to reason through premisses that are better assured, he had better refuse. In other words, in serious inquiry he ought not to grant it, unless he be more sure about it than about the conclusion; whereas in a dialectical exercise he may do so if he is merely satisfied of its truth. Clearly, then, the circumstances under which such admissions should be claimed are different for a mere questioner and for a serious teacher.

4

As to the formulation, then, and arrangement of one's questions, about enough has been said.
With regard to the giving of answers, we must first define what is the business of a good answerer, as of a good questioner. The business of the questioner is so to develop the argument as to make the answerer utter the most extrvagant paradoxes that necessarily follow because of his position: while that of the answerer is to make it appear that it is not he who is responsible for the absurdity or paradox, but only his position: for one may, perhaps, distinguish between the mistake of taking up a wrong position to start with, and that of not maintaining it properly, when once taken up.

5

Inasmuch as no rules are laid down for those who argue for the sake of training and of examination: – and the aim of those engaged in teaching or learning is quite different from that of those engaged in a competition; as is the latter from that of those who discuss things together in the spirit of inquiry: for a learner should always state what he thinks: for no one is even trying to teach him what is false; whereas in a competition the business of the questioner is to appear by all means to produce an effect upon the other, while that of the answerer is to appear unaffected by him; on the other hand, in an assembly of disputants discussing in the spirit not of a competition but of an examination and inquiry, there are as yet no articulate rules about what the answerer should aim at, and what kind of things he should and should not grant for the correct or incorrect defence of his position: – inasmuch, then, as we have no tradition bequeathed to us by others, let us try to say something upon the matter for ourselves.
The thesis laid down by the answerer before facing the questioner's argument is bound of necessity to be one that is either generally accepted or generally rejected or else is neither: and moreover is so accepted or rejected either absolutely or else with a restriction, e.g. by some given person, by the speaker or by some one else. The manner, however, of its acceptance or rejection, whatever it be, makes no difference: for the right way to answer, i.e. to admit or to refuse to admit what has been asked, will be the same in either case. If, then, the statement laid down by the answerer be generally rejected, the conclusion aimed at by the questioner is bound to be one generally accepted, whereas if the former be generally accepted, the latter is generally rejected: for the conclusion which the questioner tries to draw is always the opposite of the statement laid down. If, on the other hand, what is laid down is generally neither rejected nor accepted, the conclusion will be of the same type as well. Now since a man who reasons correctly demonstrates his proposed conclusion from

premisses that are more generally accepted, and more familiar, it is clear that (1) where the view laid down by him is one that generally is absolutely rejected, the answerer ought not to grant either what is thus absolutely not accepted at all, or what is accepted indeed, but accepted less generally than the questioner's conclusion. For if the statement laid down by the answerer be generally rejected, the conclusion aimed at by the questioner will be one that is generally accepted, so that the premisses secured by the questioner should all be views generally accepted, and more generally accepted than his proposed conclusion, if the less familiar is to be inferred through the more familiar. Consequently, if any of the questions put to him be not of this character, the answerer should not grant them. (2) If, on the other hand, the statement laid down by the answerer be generally accepted without qualification, clearly the conclusion sought by the questioner will be one generally rejected without qualification. Accordingly, the answerer should admit all views that are generally accepted and, of those that are not generally accepted, all that are less generally rejected than the conclusion sought by the questioner. For then he will probably be thought to have argued sufficiently well. (3) Likewise, too, if the statement laid down by the answerer be neither rejected generally nor generally accepted; for then, too, anything that appears to be true should be granted, and, of the views not generally accepted, any that are more generally accepted than the questioner's conclusion; for in that case the result will be that the arguments will be more generally accepted. If, then, the view laid down by the answerer be one that is generally accepted or rejected without qualification, then the views that are accepted absolutely must be taken as the standard of comparison: whereas if the view laid down be one that is not generally accepted or rejected, but only by the answerer, then the standard whereby the latter must judge what is generally accepted or not, and must grant or refuse to grant the point asked, is himself. If, again, the answerer be defending some one else's opinion, then clearly it will be the latter's judgement to which he must have regard in granting or denying the various points. This is why those, too, who introduce other's opinions, e.g. that 'good and evil are the same thing, as Heraclitus says,' refuse to admit the impossibility of contraries belonging at the same time to the same thing; not because they do not themselves believe this, but because on Heraclitus' principles one has to say so. The same thing is done also by those who take on the defence of one another's positions; their aim being to speak as would the man who stated the position.

6

It is clear, then, what the aims of the answerer should be, whether the position he lays down be a view generally accepted without qualification or accepted by some definite person. Now every question asked is bound to involve some view that is either generally held or generally rejected or neither, and is also bound to be either relevant to the argument or irrelevant: if then it be a view generally accepted and irrelevant, the answerer should grant it and remark that it is the accepted view: if it be a view not generally accepted and irrelevant, he should grant it but add a comment that it is not generally accepted, in order to avoid the appearance of being a simpleton. If it be relevant and also be generally accepted, he should admit that it is the view generally accepted but say that it lies too close to the original proposition, and that if it be granted the problem proposed collapses. If what is claimed by the questioner be relevant but too generally rejected, the answerer, while admitting that if it be granted the conclusion sought follows, should yet protest that the proposition is too absurd to be admitted. Suppose, again, it be a view that is neither rejected generally nor generally accepted, then, if it be irrelevant to the argument, it may be granted without restriction; if, however, it be relevant, the answerer should add the comment that, if it be granted, the original problem collapses. For then the answerer will not be held to be personally accountable for what

happens to him, if he grants the several points with his eyes open, and also the questioner will be able to draw his inference, seeing that all the premisses that are more generally accepted than the conclusion are granted him. Those who try to draw an inference from premisses more generally rejected than the conclusion clearly do not reason correctly: hence, when men ask these things, they ought not to be granted.

7

The questioner should be met in a like manner also in the case of terms used obscurely, i.e. in several senses. For the answerer, if he does not understand, is always permitted to say 'I do not understand': he is not compelled to reply 'Yes' or 'No' to a question which may mean different things. Clearly, then, in the first place, if what is said be not clear, he ought not to hesitate to say that he does not understand it; for often people encounter some difficulty from assenting to questions that are not clearly put. If he understands the question and yet it covers many senses, then supposing what it says to be universally true or false, he should give it an unqualified assent or denial: if, on the other hand, it be partly true and partly false, he should add a comment that it bears different senses, and also that in one it is true, in the other false: for if he leave this distinction till later, it becomes uncertain whether originally as well he perceived the ambiguity or not. If he does not foresee the ambiguity, but assents to the question having in view the one sense of the words, then, if the questioner takes it in the other sense, he should say, 'That was not what I had in view when I admitted it; I meant the other sense': for if a term or expression covers more than one thing, it is easy to disagree. If, however, the question is both clear and simple, he should answer either 'Yes' or 'No'.

8

A premiss in reasoning always either is one of the constituent elements in the reasoning, or else goes to establish one of these: (and you can always tell when it is secured in order to establish something else by the fact of a number of similar questions being put: for as a rule people secure their universal by means either of induction or of likeness): – accordingly the particular propositions should all be admitted, if they are true and generally held. On the other hand, against the universal one should try to bring some negative instance; for to bring the argument to a standstill without a negative instance, either real or apparent, shows ill-temper. If, then, a man refuses to grant the universal when supported by many instances, although he has no negative instance to show, he obviously shows ill-temper. If, moreover, he cannot even attempt a counter-proof that it is not true, far more likely is he to be thought ill-tempered – although even counter-proof is not enough: for we often hear arguments that are contrary to common opinions, whose solution is yet difficult, e.g. the argument of Zeno that it is impossible to move or to traverse the stadium; – but still, this is no reason for omitting to assert the opposites of these views. If, then, a man refuses to admit the proposition without having either a negative instance or some counter-argument to bring against it, clearly he is ill-tempered: for ill-temper in argument consists in answering in ways other than the above, so as to wreck the reasoning.

9

Before maintaining either a thesis or a definition the answerer should try his hand at attacking it by himself; for clearly his business is to oppose those positions from which questioners demolish what he has laid down.

He should beware of maintaining a hypothesis that is generally rejected: and this it may be in two ways: for it may be one which results in absurd statements, e.g. suppose any one were to say that everything is in motion or that nothing is; and also there are all those which only a bad character would choose, and which are implicitly opposed to men's wishes, e.g. that pleasure is the good, and that to do injustice is better than to suffer it. For people then hate him, supposing him to maintain them not for the sake of argument but because he really thinks them.

10

Of all arguments that reason to a false conclusion the right solution is to demolish the point on which the fallacy that occurs depends: for the demolition of any random point is no solution, even though the point demolished be false. For the argument may contain many falsehoods, e.g. suppose some one to secure the premisses, 'He who sits, writes' and 'Socrates is sitting': for from these it follows that 'Socrates is writing'. Now we may demolish the proposition 'Socrates is sitting', and still be no nearer a solution of the argument; it may be true that the point claimed is false; but it is not on that that fallacy of the argument depends: for supposing that any one should happen to be sitting and not writing, it would be impossible in such a case to apply the same solution. Accordingly, it is not this that needs to be demolished, but rather that 'He who sits, writes': for he who sits does not always write. He, then, who has demolished the point on which the fallacy depends, has given the solution of the argument completely. Any one who knows that it is on such and such a point that the argument depends, knows the solution of it, just as in the case of a figure falsely drawn. For it is not enough to object, even if the point demolished be a falsehood, but the reason of the fallacy should also be proved: for then it would be clear whether the man makes his objection with his eyes open or not.

There are four possible ways of preventing a man from working his argument to a conclusion. It can be done either by demolishing the point on which the falsehood that comes about depends, or by stating an objection directed against the questioner: for often when a solution has not as a matter of fact been brought, yet the questioner is rendered thereby unable to pursue the argument any farther. Thirdly, one may object to the questions asked: for it may happen that what the questioner wants does not follow from the questions he has asked because he has asked them badly, whereas if something additional be granted the conclusion comes about. If, then, the questioner be unable to pursue his argument farther, the objection would properly be directed against the questioner; if he can do so, then it would be against his questions. The fourth and worst kind of objection is that which is directed to the time allowed for discussion: for some people bring objections of a kind which would take longer to answer than the length of the discussion in hand.

There are then, as we said, four ways of making objections: but of them the first alone is a solution: the others are just hindrances and stumbling-blocks to prevent the conclusions.

11

Adverse criticism of an argument on its own merits, and of it when presented in the form of questions, are two different things. For often the failure to carry through the argument correctly in discussion is due to the person questioned, because he will not grant the steps of which a correct argument might have been made against his position: for it is not in the power of the one side only to effect properly a result that depends on both alike. Accordingly it sometimes becomes necessary

to attack the speaker and not his position, when the answerer lies in wait for the points that are contrary to the questioner and becomes abusive as well: when people lose their tempers in this way, their argument becomes a contest, not a discussion. Moreover, since arguments of this kind are held not for the sake of instruction but for purposes of practice and examination, clearly one has to reason not only to true conclusions, but also to false ones, and not always through true premisses, but sometimes through false as well. For often, when a true proposition is put forward, the dialectician is compelled to demolish it: and then false propositions have to be formulated. Sometimes also when a false proposition is put forward, it has to be demolished by means of false propositions: for it is possible for a given man to believe what is not the fact more firmly than the truth. Accordingly, if the argument be made to depend on something that he holds, it will be easier to persuade or help him. He, however, who would rightly convert any one to a different opinion should do so in a dialectical and not in a contentious manner, just as a geometrician should reason geometrically, whether his conclusion be false or true: what kind of syllogisms are dialectical has already been said. The principle that a man who hinders the common business is a bad partner, clearly applies to an argument as well; for in arguments as well there is a common aim in view, except with mere contestants, for these cannot both reach the same goal; for more than one cannot possibly win. It makes no difference whether he effects this as answerer or as questioner: for both he who asks contentious questions is a bad dialectician, and also he who in answering fails to grant the obvious answer or to understand the point of the questioner's inquiry. What has been said, then, makes it clear that adverse criticism is not to be passed in a like strain upon the argument on its own merits, and upon the questioner: for it may very well be that the argument is bad, but that the questioner has argued with the answerer in the best possible way: for when men lose their tempers, it may perhaps be impossible to make one's inferences straight-forwardly as one would wish: we have to do as we can.

Inasmuch as it is indeterminate when people are claiming the admission of contrary things, and when they are claiming what originally they set out to prove – for often when they are talking by themselves they say contrary things, and admit afterwards what they have previously denied; for which reason they often assent, when questioned, to contrary things and to what originally had to be proved – the argument is sure to become vitiated. The responsibility, however, for this rests with the answerer, because while refusing to grant other points, he does grant points of that kind. It is, then, clear that adverse criticism is not to be passed in a like manner upon questioners and upon their arguments.

In itself an argument is liable to five kinds of adverse criticism:

(1) The first is when neither the proposed conclusion nor indeed any conclusion at all is drawn from the questions asked, and when most, if not all, of the premisses on which the conclusion rests are false or generally rejected, when, moreover, neither any withdrawals nor additions nor both together can bring the conclusions about.

(2) The second is, supposing the reasoning, though constructed from the premisses, and in the manner, described above, were to be irrelevant to the original position.

(3) The third is, supposing certain additions would bring an inference about but yet these additions were to be weaker than those that were put as questions and less generally held than the conclusion.

(4) Again, supposing certain withdrawals could effect the same: for sometimes people secure more premisses than are necessary, so that it is not through them that the inference comes about.

(5) Moreover, suppose the premisses be less generally held and less credible than the conclusion, or if, though true, they require more trouble to prove than the proposed view.

One must not claim that the reasoning to a proposed view shall in every case equally be a view generally accepted and convincing: for it is a direct result of the nature of things that some subjects

of inquiry shall be easier and some harder, so that if a man brings people to accept his point from opinions that are as generally received as the case admits, he has argued his case correctly. Clearly, then, not even the argument itself is open to the same adverse criticism when taken in relation to the proposed conclusion and when taken by itself. For there is nothing to prevent the argument being open to reproach in itself, and yet commendable in relation to the proposed conclusion, or again, vice versa, being commendable in itself, and yet open to reproach in relation to the proposed conclusion, whenever there are many propositions both generally held and also true whereby it could easily be proved. It is possible also that an argument, even though brought to a conclusion, may sometimes be worse than one which is not so concluded, whenever the premisses of the former are silly, while its conclusion is not so; whereas the latter, though requiring certain additions, requires only such as are generally held and true, and moreover does not rest as an argument on these additions. With those which bring about a true conclusion by means of false premisses, it is not fair to find fault: for a false conclusion must of necessity always be reached from a false premiss, but a true conclusion may sometimes be drawn even from false premisses; as is clear from the Analytics.

Whenever by the argument stated something is demonstrated, but that something is other than what is wanted and has no bearing whatever on the conclusion, then no inference as to the latter can be drawn from it: and if there appears to be, it will be a sophism, not a proof. A philosopheme is a demonstrative inference: an epichireme is a dialectical inference: a sophism is a contentious inference: an aporeme is an inference that reasons dialectically to a contradiction.

If something were to be shown from premisses, both of which are views generally accepted, but not accepted with like conviction, it may very well be that the conclusion shown is something held more strongly than either. If, on the other hand, general opinion be for the one and neither for nor against the other, or if it be for the one and against the other, then, if the pro and con be alike in the case of the premisses, they will be alike for the conclusion also: if, on the other hand, the one preponderates, the conclusion too will follow suit.

It is also a fault in reasoning when a man shows something through a long chain of steps, when he might employ fewer steps and those already included in his argument: suppose him to be showing (e.g.) that one opinion is more properly so called than another, and suppose him to make his postulates as follows: ‘x-in-itself is more fully x than anything else’: ‘there genuinely exists an object of opinion in itself’: therefore ‘the object-of-opinion-in-itself is more fully an object of opinion than the particular objects of opinion’. Now ‘a relative term is more fully itself when its correlate is more fully itself’: and ‘there exists a genuine opinion-in-itself, which will be «opinion» in a more accurate sense than the particular opinions’: and it has been postulated both that ‘a genuine opinion-in-itself exists’, and that ‘x-in-itself is more fully x than anything else’: therefore ‘this will be opinion in a more accurate sense’. Wherein lies the viciousness of the reasoning? Simply in that it conceals the ground on which the argument depends.

12

An argument is clear in one, and that the most ordinary, sense, if it be so brought to a conclusion as to make no further questions necessary: in another sense, and this is the type most usually advanced, when the propositions secured are such as compel the conclusion, and the argument is concluded through premisses that are themselves conclusions: moreover, it is so also if some step is omitted that generally is firmly accepted.

An argument is called fallacious in four senses: (1) when it appears to be brought to a conclusion, and is not really so – what is called ‘contentious’ reasoning: (2) when it comes to a conclusion but

not to the conclusion proposed – which happens principally in the case of reductiones ad impossibile: (3) when it comes to the proposed conclusion but not according to the mode of inquiry appropriate to the case, as happens when a non-medical argument is taken to be a medical one, or one which is not geometrical for a geometrical argument, or one which is not dialectical for dialectical, whether the result reached be true or false: (4) if the conclusion be reached through false premisses: of this type the conclusion is sometimes false, sometimes true: for while a false conclusion is always the result of false premisses, a true conclusion may be drawn even from premisses that are not true, as was said above as well.

Fallacy in argument is due to a mistake of the arguer rather than of the argument: yet it is not always the fault of the arguer either, but only when he is not aware of it: for we often accept on its merits in preference to many true ones an argument which demolishes some true proposition if it does so from premisses as far as possible generally accepted. For an argument of that kind does demonstrate other things that are true: for one of the premisses laid down ought never to be there at all, and this will then be demonstrated. If, however, a true conclusion were to be reached through premisses that are false and utterly childish, the argument is worse than many arguments that lead to a false conclusion, though an argument which leads to a false conclusion may also be of this type. Clearly then the first thing to ask in regard to the argument in itself is, 'Has it a conclusion?'; the second, 'Is the conclusion true or false?'; the third, 'Of what kind of premisses does it consist?': for if the latter, though false, be generally accepted, the argument is dialectical, whereas if, though true, they be generally rejected, it is bad: if they be both false and also entirely contrary to general opinion, clearly it is bad, either altogether or else in relation to the particular matter in hand.

13

Of the ways in which a questioner may beg the original question and also beg contraries the true account has been given in the Analytics:' but an account on the level of general opinion must be given now.

People appear to beg their original question in five ways: the first and most obvious being if any one begs the actual point requiring to be shown: this is easily detected when put in so many words; but it is more apt to escape detection in the case of different terms, or a term and an expression, that mean the same thing. A second way occurs whenever any one begs universally something which he has to demonstrate in a particular case: suppose (e.g.) he were trying to prove that the knowledge of contraries is one and were to claim that the knowledge of opposites in general is one: for then he is generally thought to be begging, along with a number of other things, that which he ought to have shown by itself. A third way is if any one were to beg in particular cases what he undertakes to show universally: e.g. if he undertook to show that the knowledge of contraries is always one, and begged it of certain pairs of contraries: for he also is generally considered to be begging independently and by itself what, together with a number of other things, he ought to have shown. Again, a man begs the question if he begs his conclusion piecemeal: supposing e.g. that he had to show that medicine is a science of what leads to health and to disease, and were to claim first the one, then the other; or, fifthly, if he were to beg the one or the other of a pair of statements that necessarily involve one other; e.g. if he had to show that the diagonal is incommensurable with the side, and were to beg that the side is incommensurable with the diagonal.

The ways in which people assume contraries are equal in number to those in which they beg their original question. For it would happen, firstly, if any one were to beg an opposite affirmation and negation; secondly, if he were to beg the contrary terms of an antithesis, e.g. that the same thing is good and evil; thirdly, suppose any one were to claim something universally and then proceed to

beg its contradictory in some particular case, e.g. if having secured that the knowledge of contraries is one, he were to claim that the knowledge of what makes for health or for disease is different; or, fourthly, suppose him, after postulating the latter view, to try to secure universally the contradictory statement. Again, fifthly, suppose a man begs the contrary of the conclusion which necessarily comes about through the premisses laid down; and this would happen suppose, even without begging the opposites in so many words, he were to beg two premisses such that this contradictory statement that is opposite to the first conclusion will follow from them. The securing of contraries differs from begging the original question in this way: in the latter case the mistake lies in regard to the conclusion; for it is by a glance at the conclusion that we tell that the original question has been begged: whereas contrary views lie in the premisses, viz. in a certain relation which they bear to one another.

14

The best way to secure training and practice in arguments of this kind is in the first place to get into the habit of converting the arguments. For in this way we shall be better equipped for dealing with the proposition stated, and after a few attempts we shall know several arguments by heart. For by 'conversion' of an argument is meant the taking the reverse of the conclusion together with the remaining propositions asked and so demolishing one of those that were conceded: for it follows necessarily that if the conclusion be untrue, some one of the premisses is demolished, seeing that, given all the premisses, the conclusion was bound to follow. Always, in dealing with any proposition, be on the look-out for a line of argument both pro and con: and on discovering it at once set about looking for the solution of it: for in this way you will soon find that you have trained yourself at the same time in both asking questions and answering them. If we cannot find any one else to argue with, we should argue with ourselves. Select, moreover, arguments relating to the same thesis and range them side by side: for this produces a plentiful supply of arguments for carrying a point by sheer force, and in refutation also it is of great service, whenever one is well stocked with arguments pro and con: for then you find yourself on your guard against contrary statements to the one you wish to secure. Moreover, as contributing to knowledge and to philosophic wisdom the power of discerning and holding in one view the results of either of two hypotheses is no mean instrument; for it then only remains to make a right choice of one of them. For a task of this kind a certain natural ability is required: in fact real natural ability just is the power right to choose the true and shun the false. Men of natural ability can do this; for by a right liking or disliking for whatever is proposed to them they rightly select what is best.

It is best to know by heart arguments upon those questions which are of most frequent occurrence, and particularly in regard to those propositions which are ultimate: for in discussing these answerers frequently give up in despair. Moreover, get a good stock of definitions: and have those of familiar and primary ideas at your fingers' ends: for it is through these that reasonings are effected. You should try, moreover, to master the heads under which other arguments mostly tend to fall. For just as in geometry it is useful to be practised in the elements, and in arithmetic to have the multiplication table up to ten at one's fingers' ends – and indeed it makes a great difference in one's knowledge of the multiples of other numbers too – likewise also in arguments it is a great advantage to be well up in regard to first principles, and to have a thorough knowledge of premisses at the tip of one's tongue. For just as in a person with a trained memory, a memory of things themselves is immediately caused by the mere mention of their loci, so these habits too will make a man readier in reasoning, because he has his premisses classified before his mind's eye, each under

its number. It is better to commit to memory a premiss of general application than an argument: for it is difficult to be even moderately ready with a first principle, or hypothesis.
Moreover, you should get into the habit of turning one argument into several, and conceal your procedure as darkly as you can: this kind of effect is best produced by keeping as far as possible away from topics akin to the subject of the argument. This can be done with arguments that are entirely universal, e.g. the statement that 'there cannot be one knowledge of more than one thing': for that is the case with both relative terms and contraries and co-ordinates.
Records of discussions should be made in a universal form, even though one has argued only some particular case: for this will enable one to turn a single rule into several. A like rule applies in Rhetoric as well to enthymemes. For yourself, however, you should as far as possible avoid universalizing your reasonings. You should, moreover, always examine arguments to see whether they rest on principles of general application: for all particular arguments really reason universally, as well, i.e. a particular demonstration always contains a universal demonstration, because it is impossible to reason at all without using universals.
You should display your training in inductive reasoning against a young man, in deductive against an expert. You should try, moreover, to secure from those skilled in deduction their premisses, from inductive reasoners their parallel cases; for this is the thing in which they are respectively trained. In general, too, from your exercises in argumentation you should try to carry away either a syllogism on some subject or a refutation or a proposition or an objection, or whether some one put his question properly or improperly (whether it was yourself or some one else) and the point which made it the one or the other. For this is what gives one ability, and the whole object of training is to acquire ability, especially in regard to propositions and objections. For it is the skilled propounder and objector who is, speaking generally, a dialectician. To formulate a proposition is to form a number of things into one – for the conclusion to which the argument leads must be taken generally, as a single thing – whereas to formulate an objection is to make one thing into many; for the objector either distinguishes or demolishes, partly granting, partly denying the statements proposed.
Do not argue with every one, nor practise upon the man in the street: for there are some people with whom any argument is bound to degenerate. For against any one who is ready to try all means in order to seem not to be beaten, it is indeed fair to try all means of bringing about one's conclusion: but it is not good form. Wherefore the best rule is, not lightly to engage with casual acquaintances, or bad argument is sure to result. For you see how in practising together people cannot refrain from contentious argument.
It is best also to have ready-made arguments relating to those questions in which a very small stock will furnish us with arguments serviceable on a very large number of occasions. These are those that are universal, and those in regard to which it is rather difficult to produce points for ourselves from matters of everyday experience.