

Chapter 3

ELENCHUS: DIRECT AND INDIRECT

SYLLOGISM IN THE ELENCHUS



Let us now examine the reasoning that Socrates uses in his elenchus. There are all degrees of explicitness and tacitness in reasoning, so that, whatever definition we frame of the difference between reasoned and unreasoned statement, there will be some passages that our definition does not confidently classify. The dogma merges into the argument by infinite stages; and the argument, in which we are expected to infer one part of a whole from the rest, merges by infinite stages into the description of a coherent system, where each of the parts is necessitated by the rest, but the reader is not invited to infer any one of them, but rather to contemplate the connected structure as a whole. If a writer says 'A is B and therefore C is D', that is an argument. But if he says 'A is B and that is why C is D', it is not an argument; for he is assuming that we already believe that C is D, and merely inviting us to realize that it follows from A's being B. When the conclusion is stated before the premisses, then, other things being equal, we more definitely have an argument than when the premisses are stated before the conclusion. The more explicit arguments, as those of geometry, always tell you first what they are proposing to prove.

This state of affairs prevents us from discovering any propositions true of all the arguments of the early dialogues as such. We must therefore concentrate on the more explicit cases (excluding, for example, such passages as *Ap.* 28-35, although we should call them 'well reasoned' and systematic); and these will be for the most part passages in dialogue form where the conclusion to be proved or the proposition to be refuted is clearly indicated at the beginning, even if Socrates does pretend not to be refuting it.

Let us follow Aristotle and say that every dialectical argument is either a syllogism or an epagoge (*Topics* I 12). By 'a dialectical argument' let us mean, as Aristotle does, any argument put forward in conversation, proceeding on premisses admitted by the other party, and not requiring any special knowledge. It follows that every Socratic elenchus is a dialectical argument. By a 'syllogism' let us not mean, in the narrow modern sense, an argument depending on our insight into the relation of class-inclusion; but, to translate Aristotle's own words, any 'argument in which, after certain propositions have been assumed, there necessarily results a proposition other than the assumptions because of the assumptions'. This broad sense of the term is certainly the only one Aristotle has

in mind throughout the *Topics*, from which the definition comes (*Topics* I 1, 100A25); and probably it is also the only one he has in mind even in the *Prior Analytics*, although he actually studies only class-inclusion inferences there; at any rate his definition of 'syllogism' at the beginning of that work is only verbally different from the definition in the *Topics*.

The meaning of 'epagoge' may be explained later; but first we must deal with the syllogism in the Socratic elenchus. In the dialogues themselves there are no cut-and-dried names for this operation. 'Apodeixis' and its verb occur occasionally in a broad sense that would include both syllogism and epagoge. The noun 'syllogism' does not occur until the middle dialogues (*Cra.* 412A and *Tht.* 186D). The verb 'syllogize' occurs in the *Charmides* (160D) not as something to be done towards the end of an elenchus, but as something to be done in formulating a thesis: you form the thesis by syllogizing or putting together all the relevant facts. It occurs twice in the *Gorgias* (479C and 498E). Literally it means 'add up'; and as we speak of adding up a sum, although strictly the sum is the result of adding the items, so these two passages speak of adding up the conclusion; and therewith we are near to Aristotle's broad sense. The word occurs often in the middle and later dialogues with this sense of 'infer'. The word 'analogize' is also found in the same sense (*Prt.* 332D, *Rp.* 330E, VII 524D). Another phrase for the same thing is 'What is the consequence of our statements?' (*Euthd.* 281E). The thing itself can often be noticed in the Socratic elenchus, that is, the moment when Socrates, having obtained his premisses separately, explicitly brings them together so that their joint implication becomes evident to the answerer. Here is an example.

I say, Socrates, (that the rhapsode is competent to judge) all parts (of Homer).

-- No you do not say all parts, Ion. Or are you so forgetful? Surely a rhapsode ought not to be a forgetful man.

-- What am I forgetting?

-- Do you not remember saying that the science of rhapsody was distinct from that of charioteering?

-- I do.

-- And did you not admit that if it were distinct it would know distinct objects?

-- Yes.

-- Then on your view the rhapsodic science and the rhapsode will not know everything. (*Ion* 539E.)

This moment of syllogizing is the moment when all is made clear. The purpose of the separate premisses, the way they fit together, and the fact that they entail the falsehood of his thesis, now become evident to the answerer. In the earlier stages, while the premisses are being obtained, Socrates is not concerned to reveal the tendency of his questions. Sometimes, indeed, he is deliberately trying not to reveal it, in order that the answerer may not refuse to grant him the premisses he needs. This is a trick that the *Topics* recommends; and Socrates is no doubt practising it, for example, when he obtains his premisses in a queer order (as in *Prt.* 332A-333B). Most of the arguments and fallacies and dodges described in Aristotle's *Topics* and *Sophistical Elenchi* can be exemplified from Plato's early

dialogues; and Alexander of Aghrodisias often does so in his commentary on those two works of Aristotle's.

The Socratic elenchus often includes an element prior to the obtainment of the premisses but subsequent to the obtainment of the thesis or refutand. This is the elucidation and elaboration of the thesis. It serves to make the answerer's conception clearer. It gives Socrates time to think of a refutation. It often allows him to interpret the thesis in a way which the answerer accepts as an interesting extension of his idea, but which enables Socrates to refute it as he could not have done if it had been more moderately or more vaguely formulated. Where this element is absent, the reason is sometimes that the answerer has himself developed his thesis in a long speech, and sometimes that Socrates defines the thesis in another way, by deliberately taking it in a perverse sense, so that the answerer is forced to say more precisely what he means

DIRECT AND INDIRECT ELENCHUS

The syllogisms of the Socratic elenchus fall into many types. For some of them we can easily find names from the textbooks of logic. We can recognize here a sorites, there a dilemma, there an argument by elimination or alternative syllogism, there a hypothetical syllogism, there a categorical syllogism in the narrow sense in barbara or one of its other forms. For many more there are no obvious names; and if we tried to make them we might need dozens. But there is one great division which is interesting in itself and important for Plato's theory of hypothesis, the division between direct and indirect argument.

The distinction between direct and indirect applies both to the refutation and to the establishment of propositions. To refute a thesis indirectly is to deduce a falsehood from that thesis; in other words, to show that the thesis entails a consequence which is so repugnant to you that you would rather abandon the thesis than keep it and the consequence along with it. To establish a thesis indirectly is to deduce a falsehood from the contradictory of that thesis; in other words, to show that its contradictory is false because it entails an intolerable consequence. Reduction to absurdity is a case of indirect argument, for absurdity is one form of falsehood. Direct refutation is best defined as any refutation that is not indirect; but we can also say that it is the refutation that reaches the contradictory of the refutand without at any time or in any way assuming the refutand. Direct establishment is best defined as any establishment that is not indirect; but we can also say that it is the establishment that reaches the demonstrand without at any time or in any way assuming the contradictory of the demonstrand. The argument 'A, therefore B' is a direct establishment of B and a direct refutation of not-B. The argument 'A, therefore not B, therefore not A' is an indirect establishment of not-A and an indirect refutation of A. The indirect argument can be just as valid as the direct; in Aristotle's language, it can really syllogize, and not merely seem to. And it is often more striking than the direct.

Whether an argument is direct or indirect is not always clear. This is a surprising statement when we think of the distinction in general terms, and especially when we have just finished defining it; but it is not surprising when we are reading particular arguments and trying to classify them. Perhaps we can always tell

confidently whether a geometrical argument is direct or indirect; but very few arguments are as explicit and as formalized as the geometrical. Moreover, it seems that every direct argument can be converted into an indirect argument; for if we can say 'A, therefore B' it seems that we can say 'Not-B, therefore not-A; but A, therefore B'. And if this is true we can easily believe that an argument could be so vaguely stated as not to have definitely assumed either the direct or the indirect form. The following question of principle adds to the difficulty. When we disprove 'All X is A' by pointing to an X that is not A, is that direct or indirect refutation? To make it indirect we must suppose that our thought is 'If all X were A, this X would be A; but this X is not A; therefore it is false that all X is A.' Yet in practice this would usually appear an absurdly elaborate way of putting the argument; the natural way of putting it is to say 'But this X is not A' and nothing more, that is, to express only the minor premiss of the hypothetical syllogism. The question is important for the analysis of the early dialogues, because they use the negative instance very commonly. Their problem is frequently one of definition; and the most obvious way to refute a definition is to produce a case that fails under the definition but not under the definiend, or contrariwise. The best conclusion is that refutation by the negative instance is essentially indirect; but owing to its extreme simplicity and lucidity it is rarely stated in the full form. If we deny this we shall find ourselves making a wide distinction between narrowly related forms. For example, the following argument is clearly indirect: 'If all X were A, then, since P is an X, P would be A; but P is not A; therefore it is false that all X is A.' Yet it differs from the simple negative instance only in that we need an extra premiss in order to see clearly that P is a negative instance of the thesis that all X is A. I have therefore classified all arguments from the negative instance as indirect.

Taking only the more distinct and more formalized arguments in these nine dialogues, *Protagoras*, *Euthyphro*, *Laches*, *Charmides*, *Lysis*, *Republic I*, *Gorgias*, *Meno*, and *Euthydemus* excluding the sophists' absurdities, I count roughly thirty-nine arguments of which thirty-one seem to be indirect. Thus about three-quarters of the arguments appear to be indirect. The fraction is greatest in *Charmides*, *Lysis*, *Euthydemus*, smallest in *Republic I* and *Protagoras*.

Every indirect argument is in outline a destructive hypothetical syllogism: 'If A, then B; but not B, therefore not A'. In this formula let us call not-A the conclusion; not-B the minor premiss; 'if A then B' the major premiss; B the falsehood and also the consequent; A the assumption and also -- when the argument is a refutation -- the thesis or the refutand. Now in some indirect arguments the consequent follows from the assumption immediately, but in others it does not. From the assumption that all men are immortal it follows immediately that all wicked men are immortal; but that Bonzo is immortal does not follow unless we add the extra premiss that Bonzo is a man. Indirect arguments may therefore be divided into those that require extra premisses in order to deduce the falsehood from the assumption and those that do not. Many of them require many extra premisses and a great deal of inference; when that is so the major premiss expands into a long deduction and ceases to look like a hypothetical proposition, and then we lose sight of the fact that the whole argument is in outline a hypothetical syllogism. This happens, for example, in almost any reduction to absurdity in geometry. Of the indirect arguments in the

early dialogues some employ such independent premisses and others do not. At *Charmides* 170, for example, from the thesis that temperance is knowledge of knowledge only, Socrates professes to deduce without the aid of any extra premiss the unacceptable consequence that temperance, when it knows knowledge, does not know what that knowledge is knowledge of. The refutation without extra premisses is common in the *Lysis*; otherwise the arguments in that dialogue would not be so unusually short.

In one sense there is an independent premiss in every indirect refutation, namely, the minor premiss of the hypothetical syllogism. Every indirect argument is a reduction to a falsehood. There must therefore be a premiss declaring that the falsehood is a falsehood; and that is the office of the minor premiss of a destructive hypothetical syllogism. But the above distinction within indirect arguments was between those that do and those that do not add other premisses, in addition to the minor, in order to get the consequent of the major premiss out of its antecedent.

When the questioner uses independent premisses in an indirect refutation, he will naturally obtain them first, or one of them first. For the thesis is, in this case, barren of consequences until married to another proposition. Besides, this order conceals the questioner's intention and thus makes the answerer readier to grant the premiss. When no independent premiss is used, the elenchus sometimes begins with an elaboration of the thesis, and this turns imperceptibly into the deduction from the thesis of an intolerable consequence.

In an indirect elenchus the falsehood to which the refutand is shown to lead may be of any kind or sort whatever, provided that the answerer recognizes it to be a falsehood. The elenchus fails, however absurd the consequence may seem to us, if the answerer himself denies it to be wrong, as we see Socrates denying in the *Gorgias* and the brothers denying in the *Euthydemus*. Obversely, the elenchus succeeds, however dubious the falsehood of the consequence may seem to us, if it seems false to the answerer himself. This is the only thing that can be said about the falsehood universally; but there are certain kinds of falsehood that appear more often than others because of their greater convenience or greater obviousness. In general the two most striking and most useful kinds of falsehood to which to reduce a refutand are absurdity and the contradiction of plain empirical fact. No one cares to maintain a thesis if it has been shown to lead to such a flat denial of our senses as that pigs have wings, or to such an irrationality as that the part is greater than the whole; and Socrates frequently uses both these kinds; and sometimes calls attention to an absurdity by such words as *ατοπον* and *αδυνατον* (*Chrm.* 167C). The most striking form of absurdity is contradiction; and this is frequently in Socrates' mind. At *Laches* 196B Laches implies that the previous argument led to a self-contradiction (he is probably referring to 193D-E). In *Meno* 82A Socrates fears that Meno is trying to entrap him into self-contradiction. At his trial Socrates professed to have shown that Meletus contradicted himself (*Ap.* 27A). In *Gorgias* 460-61 he professes to have exposed a contradiction between one part of Gorgias' thesis and another; and in two later refutations in that dialogue he seems without claiming it to reduce a thesis to a self-contradiction (488-89 and 498). A critic blames him for enjoying this operation (*Grg.* 461B-C). In the *Phaedo* (101D) he declares that a standing part

of his method of discovery is to see whether the consequences of a given hypothesis accord with each other or not. Plato's dialogues often blame the antilogicians or contradiction-mongers; and this suggests that the use of the reduction to contradiction was so common as to lead to abuse.

PLATO'S AWARENESS OF THIS DISTINCTION

We have distinguished between direct and indirect refutations; and within indirect refutations we have distinguished those that do not use extra premisses from those that do; and within indirect refutations we have also distinguished those that reduce the thesis to a self-contradiction from those that reduce it to another kind of falsehood. We have applied these distinctions to the refutations in the early dialogues, and found that some of the refutations are direct and others indirect, that some of the indirect refutations use no extra premisses, and that some of them reduce the thesis to a self-contradiction. The question now arises whether Plato himself also made these distinctions and applied them to his work.

To say that Plato was as aware of these logical distinctions as we are would be a gross case of 'misinterpretation by abstraction'. Even if we examine his later as well as his earlier works, we can discover no passage in which any one of these three distinctions is stated. Far from realizing the distinctions, he had not even made all of the abstractions that they presuppose; for he has no word for 'premiss' and no word for 'indirect argument'. We have therefore only been pointing out variations that are actually present in the refutations he depicts. We have not been saying, and must not say, that he himself was aware of these variations in the abstract way in which we have described them. No one can ever be conscious of all the distinctions that could truly be made about his own writings; and there is nothing surprising or derogatory to Plato in the view that he had not made these logical distinctions.

On the other hand, to be unaware of a distinction is not necessarily to fail ever to think of either of the distincts; it is more often to think only of one of them, and to apply that one not merely where it is appropriate but also where the other would be appropriate. And this is what Plato seems to have done. Failing to distinguish direct from indirect argument, he thought of elenchus as being always indirect. Not that he explicitly said to himself that elenchus is always indirect, for he did not have the logical term 'indirect'; but that, in stating or discussing any or every elenchus, he habitually *spoke as if* the elenchus consisted in making the refutand lead to a falsehood, which is what we mean by 'indirect argument'. Failing, furthermore, to distinguish the indirect elenchus which uses no independent premiss from that which does, he thought of elenchus as never using an independent premiss. Not that he explicitly said to himself that it never does so, for he did not have the logical term 'premiss'; but that, when discussing or presenting an elenchus, he habitually *wrote as if* the falsehood followed from the refutand without the aid of any extra premiss. Failing, thirdly, to distinguish the indirect elenchus which reduces the thesis to a self-contradiction from that which reduces it to another kind of falsehood, he habitually thought and wrote as if all elenchus consisted in reducing the thesis to a self-contradiction. It simply *did not occur to him* that an elenchus might sometimes not be an indirect argument reducing a thesis to self-contradiction without the aid of extra premisses, just as

many men have lived to whom it simply never occurred that the earth might go round the sun.

We are liable to object to this interpretation of Plato for three reasons. In the first place, we can point to particular refutations in the dialogues which we should all nowadays agree to be direct. Since these direct refutations are actually there in the dialogues, written by Plato himself and staring him in the face, we feel that he cannot possibly have supposed all refutations to be indirect. In the second place, whether or not there are any direct refutations in the dialogues, the logical possibility of such a species is so obvious to us that we assume that it was obvious to Plato. We feel that a great philosopher cannot have 'overlooked' such an elementary logical point. In the third place, we feel that the proposed interpretation attributes to Plato an actual logical error too gross for him to commit, namely, the error of supposing that a proposition ever can entail its own contradictory without the aid of extra premisses. Surely, we say, there are very few theses that by themselves give rise to pairs of contradictory statements, or that of themselves contradict themselves. A few queer propositions excogitated by modern logicians may do so, such as 'The class of all classes not members of themselves is not a member of itself', but surely not any proposition examined in Plato's early dialogues.

Although the first of these objections appeals to Plato's text, all three of them rest on the belief that certain logical doctrines must have been obvious to Plato because they are so obvious to any intelligent person. This belief is destructive of any true history of human thought, and ought to be abandoned. Evidently there must have been a time when the human race, or its immediate ancestor, possessed no logical propositions at all, true or false. Nor is there any necessity that logical propositions, when they did arise, should at once be those which seem obvious to us. Nor did logical propositions in any scope and abstractness arise with Socrates or with the early Plato, but, as Stenzel has shown, with the later Plato and his pupil Aristotle (Plato's *Method of Dialectic*, translated by D. J. Allan). The history of thought cannot succeed if we assume from the beginning that some idea or other is innate and necessary to any human mind.

PLATO'S CONCEPTION OF THE LOGIC OF ELENCHUS

A genuinely empirical approach to Plato's dialogues gives a result other than that asserted in these objections; for, while it shows that there are many direct refutations in the text, it also shows that Plato regarded these refutations as indirect reductions to a contradiction. In the *Gorgias* the proposition, that the professor of rhetoric is not responsible for the use his pupils make of their skill, is refuted in a perfectly direct manner, by first obtaining and then syllogizing the two premisses,

1. that if the pupil does not already know the truth about justice the professor will tell him, because the orator must know this, and
2. that he who knows the truth about justice is just.

Yet this direct refutation is referred to beforehand as a demonstration that some of Gorgias' statements 'do not exactly follow from or harmonize with' others (457E), and afterwards as a demonstration that Gorgias has contradicted himself

(487B). The latter passage also declares that Polus contradicts himself; but each of the three refutations of Polus is direct. Here then we have a striking example of the loose way in which Plato can make Socrates use the term 'contradiction'.

The same looseness appears in later dialogues. In the second book of the *Republic* (380C) Homer's and Hesiod's tales about the gods are abruptly said to contradict themselves, after a discussion which gave no evidence of self-contradiction. Later in this dialogue (V 457C) the logos or argument is said to agree with itself in a way which seems to imply that it might have contradicted itself. The *Theaetetus* (155B) contains a curious passage of this sort. Plato there brings forward four propositions of such a kind that, as we should put it, the first three together conflict with the fourth. His own description of the situation, however, is that the first three conflict with each other when we add the fourth to them.

This misinterpretation of direct refutations as being indirect reductions to self-contradiction came easier to Plato because of a certain confusion, or rather because of his failure to make a certain distinction. Every elenchus makes the answerer contradict himself in one sense, namely, in the sense in which the man who changes his opinion thereby contradicts his former opinion. For the answerer agrees to the premisses of the elenchus, and he agrees that they necessitate the conclusion, and the conclusion contradicts his original opinion. But it is one thing to make the answerer see the force of an argument that contradicts his former theory, and another thing to make the theory contradict itself. Plato confuses that contradiction of a thesis which constitutes an elenchus as such with the special form of elenchus which consists in showing that the thesis contradicts itself. The fact that every successful elenchus persuades the answerer to deny his former opinion, that is, to contradict it, made it easier for Plato to assume that every elenchus achieves this result by showing that the former opinion contradicts itself.

The strongest evidence of all is the passage in the *Phaedo* (101D) where Socrates makes it an essential point of method not to discuss an hypothesis itself until you have 'considered its results to see if they accord or disaccord with each other'. This passage entails that Plato was consciously assuming, or making Socrates assume, first, that the consequences of a single thesis may contradict each other; second, that if they do so the thesis is thereby disproved; and third, that the consequences of a single thesis may contradict each other without the aid of any extra premiss. The nineteenth-century readers of Plato saw these implications clearly, and shrank from them. They could not believe that Plato would assert such things, which seemed to them logical monstrosities. Jackson and Archer-Hind accordingly proposed to expel this phrase from the text as spurious. Goodrich (*Classical Review* XVIII 8ff.) saved the text from mutilation by going through the arguments and pointing out that in reality Plato uses extra premisses. We must understand the term 'hypothesis' in a large sense, he said, as including besides some special proposition the general body of standing propositions on which the questioner may draw for premisses. But both Goodrich and the expungers assumed that Plato's logical views were like ours in a point in which they are not. Even in mathematics, even in logic, the human race changes its opinions from age to age, although much less than in history and politics. The

evidence of the unmutilated *Phaedo*-text, and of the dialogues themselves, is that Plato assumed that any thesis may without marriage give birth to quarrelling twins.

The assumption that there are no extra premisses is a natural accompaniment of the assumption that every elenchus reduces the thesis to self-contradiction. For if additional premisses are introduced, the thesis does not contradict itself by, so to speak, its own unaided efforts. It contradicts itself only because tempted thereto by the evil demon of an extra premiss. Whatever X may be, X plus Y will always produce not-X if you choose Y judiciously.

The assumption that there are no extra premisses is made easier by the ambiguity of the phrase 'according to your logos', which Socrates frequently uses in refutations, especially in drawing the conclusion. The word 'logos' can cover every premiss and every inference in virtue of its meaning 'argument', and yet imply that there has been no extraneous premiss in virtue of its meaning 'thesis'; for in the early dialogues it often means the same as our 'proposition', and the same as 'hypothesis' means in the middle and in some of the early dialogues.

Plato's way of regarding the process of refuting a thesis comes out clearly in his *Parmenides*. Zeno there explains that his book was 'a defence of Parmenides' theory against those who try to make fun of it by showing that, if everything is one, many consequences follow that are ridiculous and contrary to the theory itself (128C-D). This sentence implies very distinctly that certain persons thought that the theory of Parmenides gave rise to consequences that contradicted itself. Nothing is said about any extra premisses that might be required to produce the contradiction. The speaker assumes that the theory by itself generates its own contradiction; and it does not occur to him that the contradiction might really be between Parmenides' theory and certain other propositions that both sides were accepting. Plato goes on to make Zeno say that his own book was an attempt to show that the opposite theory led to even more ridiculous consequences; and here too there is no suggestion that the absurdity was due to the clash of the theory with other accepted beliefs.

Later in the *Parmenides*, after the theory of Ideas has been examined, Parmenides recommends to Socrates the exercise of drawing the consequences of an hypothesis, and of its contradictory, each set of consequences to be drawn out in the fullest detail. Here again the assumption is that these consequences will follow from the hypothesis alone, and not from the hypothesis together with a standing body of other postulates (136).

The last part of the *Parmenides* consists of a long example of this mode of intellectual exercise. Here the hypotheses 'if there is a one' and 'if there is no one', are each separately made to give rise to a great many consequences. In each case these consequences are divided into those concerning the 'one' itself and those concerning the 'others', thus giving four sets of consequences. Each of these four is again divided into two violently conflicting subsets, so related to each other that, roughly speaking, each proposition in one subset is the contradictory of some proposition in its fellow subset. A vast mass of contradictions is thus produced in each of the four sets of consequences. The important point for our present purpose is that in each set this mass of contradictions is represented as

flowing simply and solely from the single hypothesis with which it begins. A modern logician, analysing the deduction, would say at once that many additional premisses are introduced; but Plato does not think so. A modern logician would say also that some of the supposed 'consequences' are really definitions; but Plato does not think this either. To put it in modern terms, Plato makes Parmenides proceed as if the number of the postulates in the postulate-set for each deduction were one and only one. Here, then, is overwhelming evidence that Plato thought of refutation as the deduction of contradictions from the refutand alone, without the aid of any other premisses.

So much by way of establishing the proposition that Plato, without ever clearly envisaging the alternatives, regarded all elenchus as the deduction of a contradiction from the refutand alone, without any additional premiss.