Dialectical Strategic Planning in Aristotle*

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Abstract: The purpose of this paper is to give an account and a rational reconstruction of the heuristic advice provided by Aristotle in the *Topics* and *Prior Analytics* in regard to the difficulty or ease of strategic planning in the context of a dialectical dialogue. The general idea is that a Questioner can foresee what his refutational syllogism would have to look like given the character of the thesis defended by the Answerer, and therefore plan accordingly. A rational reconstruction of this advice will be attempted from three perspectives: strategic planning based on the acceptability of Answerer's thesis, strategic planning based on the predicational form of the thesis, strategic planning based on the logical form of the thesis. In addition, we will provide an illustration of the potential of this heuristic advice as we apply it to the interpretation of a fragment from Plato, presuming that, in a similar way, a reading of this kind might be more generally applicable in the interpretation of the Platonic dialogues.

Keywords: acceptability, Aristotle, dialectic, heuristic advice, Plato, predicational form, logical form, refutation, strategic planning

I. Introduction

In a well-known passage found in Plato's dialogue *Meno*, Meno the Thessalian shows himself baffled after Socrates ruined his fourth attempt to define virtue and complains to his Athenian fellow in the following manner:

> Socrates, before I even met you I used to hear that you are always in a state of perplexity and that you bring others to the same state, and now I think you are bewitching and beguiling me, simply putting me under a spell, so that I am quite perplexed. Indeed, if a joke is in order, you seem, in appearance and in every other way, to be like the broad torpedo fish, for it too makes anyone who comes close and touches it feel numb, and you now seem to have had that kind of effect on me, for both my mind and my tongue are numb, and I have no other answer to give you. (...) I think you are wise not to sail away from Athens to go and stay elsewhere, for if you were to behave like this as a stranger in another city, you would be driven away for practicing sorcery. (*Meno* 80a–b)[1]

[1] All translations from Plato are to be found in Cooper 1997 and from Aristotle in Barnes 1984.

Socrates the Sorcerer, by whose magic others were brought in a profound state of puzzlement, was regarded since the times of classical Greece as the paragon of the dialecticians who played the role of Questioners in dialectical encounters. But what is this 'magic' or 'sorcery' and how does it work? To answer this questions one of 'Clarke's three laws' (Clarke 1973, 21) comes to mind, namely the third: any sufficiently advanced technology is indistinguishable from magic. Well, in the present case we should downgrade *technology* to *techne* and say that in the *techne dialektike* Socrates was certainly one of the most experienced practitioners and his effects on the untrained might have been similar to that of a dialectical magician.

It is already common-knowledge that this *techne dialektike* was needed in dialogical encounters of a specific kind, which involved two participants, a Questioner and an Answerer, and took place in private or in front of an audience. The subject of discussion was called a dialectical problem and was stated at the beginning of it by the Questioner in the following form: "Is X the definition/property/genus/accident of Y or not?" The Answerer then had to choose one side of this question by saying for example "X is the definition of Y." This was his thesis. At this point the discussion began with each of the participants having a specific purpose: the Questioner had to attack the thesis, the Answerer had to defend it. In order to achieve their individual goals each participant had specific moves at his disposal. The Questioner, as the name indicates, asked questions of the form "Is X a property of Y?" (n.b. a dialectical question is different in formulation from a dialectical problem, the latter needing to have 'or not' added). The Answerer was allowed to reply by 'Yes' or 'No,' or to ask for clarifications or present an objection. Each answer of the 'Yes' or 'No' type was considered a concession. The discussion ended when the Questioner had obtained enough concessions from the Answerer to form a syllogism with a conclusion which contradicted the Answerer's thesis. This syllogism was called refutation, and if it was considered valid, then the attack of the Questioner was considered successful. If, on the other hand, the Questioner did not manage to secure enough concessions to build up a syllogism of this kind, then the Answerer's defense was considered successful. As any practitioner of an art, Socrates knew the rules and techniques better than most of his interlocutors and this allowed him to know what the result should look like right from the start of a dialectical encounter, when his partner of discussion just opted for a thesis. And, as any skilled Questioner, he also had to some extent knowledge of how to order and direct his arguments and, if he encountered difficulties in the form of his interlocutors resisting to concede premises, hindering the argument as a consequence, how to warrant the movement forward, towards his planned conclusion. His 'magic' was a result of all these. Here we will focus on only one of his 'magical powers,' namely the 'divinatory one,' or, as we will see in what follows, his skill in dialectical strategic planning. This dialectical skill greatly improves the quality of a dialectical discussion.

We might think that dialectical discussions between unskilled participants were neither useful, nor entertaining. But there was another factor involved here. The quality of the discussion was judged by the audience and/or by the discussants. Moraux (1968, 285-286) states that the quality of a discussion did not rest on the ability of the participants alone, but also on the character of the problem discussed (therefore also on the thesis chosen to be defended/refuted). Some problems implied harder theses to defend or to refute. Some commentaries, philological or philosophical, on these matters were written (e.g. Smith 1989, 148-149; 1997, 123-128; Brunschwig 1967, LXXI-LXXII; 2007, 260-263 etc.), but they still do not offer a complete and unitary picture. A detailed discussion on how exactly the outcome and the quality of a dialectical encounter can be assessed on the basis of the discussed problem or defended thesis is still needed and the relevance of Aristotle's heuristic advice in this respect still needs to be proven by linking it to examples of usage. Based on the mentioned heuristic advice, a rational reconstruction of what is called here 'dialectical strategic planning' becomes possible, the complexity of this strategic planning being determined by the character of the thesis defended by the Answerer. To provide a reconstruction of this kind is the main purpose of the present paper. The importance and relevance of it shall be pointed out by showing that it is applicable in the interpretation of the dialectical discussions to be found in the dialogues of Plato.

With this purpose in mind, the structure of this paper shall be the following: I will begin by presenting the concept of refutation, the knowledge of what a refutation is being essential for the process of strategic planning. Then strategic planning from three perspectives will be presented: 1. Strategic planning based on the acceptability or plausibility of the thesis; 2. Strategic planning based on the predicational form of the thesis; 3. Strategic planning based on the logical form of the thesis. Following these, it will be shown that this reconstruction is useful for the interpretation of Plato's dialogues from a dialectical perspective. For this, an illustration will be provided, focusing on a short dialectical sequence found in Plato's *Charmides*.

II. Refutation

The concept on the basis of which dialectical strategic planning becomes possible is refutation. Its definition can be found in the *Sophistical Refutations*:

> to refute is to contradict one and the same attribute – not the name, but the object and one that is not synonymous but the same – and to confute it from the propositions granted, necessarily, without including in the reckoning the original point to be proved, in the same respect and relation and manner and time in which it was asserted. (*Sophistical Refutations* 5, 167a23-27)

For the present purposes, the conditions for a non-sophistical refutation[2] in a dialectical context can be presented in the following manner:

1. It should meet the general requirements for a syllogism/deduction, i.e. that the conclusion should come about by necessity from the premises,[3] since it is itself a type syllogism;[4]

2. Specific 'dialectical' conditions:

A. Regarding terms: both the Questioner and the Answerer should employ the same terms (no synonymy) and refer to the same things (no homonymy).

B. Regarding premises: accepted by the Answerer (or deduced from premises accepted by the Answerer); accepted without *petitio contrarii*;

C. Conclusion: either intermediate (the Answerer can accept it based on what he already conceded) or final which needs to be the contradictory of the Answerer's thesis; also, it should avoid *petitio principia*.[5]

The way we understand refutation[6] is essential to what follows next, because the entire strategy of the Questioner is built upon the idea of the refutation's conclusion being the contradictory/contrary of the thesis chosen by the Answerer. Therefore, if we need to know what kind of conclusion we need for the refutation we need to know what kind of thesis we have: is it reputable or implausible? Is its predicate the definition of its subject? Is the predicate the genus, property or accident of the subject? Is the proposition affirmative or negative, universal or particular in form? Is the proposition indefinite or

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[2] When it comes to the choice of terms, what is translated 'to refute' by modern translators appears in Aristotle as ἀνασκευάζειν or ἀναιρεῖν (in the *Topics*) and ἐλέγχειν (*Sophistical Refutations*) (for a discussion on this issue: Dorion 2012, 264-265).

[3] See e.g. *Prior Analytics* I, 1, 24b18-22, *Posterior Analytics* II, 5, 91b14, *Topics* I, 1, 100a25-27, *Sophistical Refutations* 1, 164b27-165a2 and 6, 168a21-23 etc.

[4] *Sophistical Refutations* 6, 168a36-37. *Sophistical Refutations* 1, 165a3-4. *Prior Analytics* II, 20, 66b14-16. For a dialogical interpretation of Aristotle's definition of the syllogism (Dutilh Novaes 2015).

[5] Although the requirements related to *petitio principii* and *contrarii* are not present in the *Sophistical Refutations*, they appear in *Topics* VIII, 13. This regulation states that for example the Questioner cannot ask the Answerer directly to concede the conclusion of a refutation as a premise of the refutation (*petitio principii*) or cannot ask the Answerer to concede the negation of an already conceded premise (*petitio contrarii*). It should also be mentioned that Aristotle has in mind several varieties of *petitio principii* and *petitio contrarii*.

[6] For treatments on the concept of refutation, see Lesher 2002 on etymology, Vlastos 1983 for Socrates, and Dorion 2012 and Bolton 2012 for Aristotle. Dorion (2012, 255-257) shows that Aristotle does not consider refutation to be peculiar to dialogical contexts and there are also non-dialectical contexts in which it can be used.

definite? If definite, then what degree of definiteness does it have?[7] Also, knowing what kind of conclusion is needed enables one to know what premises are needed to bring it about, and so on. So, to sum up, dialectical strategic planning involves 1. the assessment of the specific features of the thesis; 2. based on these features, the knowledge of what kind of conclusion and what kind of premises are needed in the refutational syllogism. This can be done from at least three, overlapping,[8] perspectives: the acceptability of the thesis vs. the acceptability of the refutation's conclusion, the predicational form of the thesis vs. the predicational form of the refutation's conclusion, the logical form of the thesis vs. the logical form of the refutation's conclusion.

Before closing this section it should be stressed that knowledge of what is designated here by "dialectical strategic planning" was essential not just for the skilled Questioner, but also for those who wanted to be a competent Answerer.[9]

III. Strategy Based on the Acceptability of the Thesis

Propositions (theses, premises or conclusions) can be or fail to be acceptable or plausible in character. If the propositions are accepted as true by a group of people then we can call them *endoxa*.[10] There are also propositions called *adoxa*, i.e. implausible propositions.[11] Endoxa and adoxa are considered to be contraries. When it comes to the acceptability of the thesis, its plausible or implausible character, Aristotle writes the following:

> If (...) the thesis is implausible (ἀδόξου), the conclusion is bound to be reputable (ἔνδοξον), whereas if the former is reputable the latter will be implausible; for the conclusion which the questioner tries to draw is always the opposite of the

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[7] Of course, if the proposition expresses a definition, genus or property if follows directly that it is universal and affirmative (or negative if it says that X is not the genus of Y); only in the case of the particular accident we have particulars (see *infra* section 4, table 3).

[8] I say overlapping because it will be observed that a thesis like "Animal is not the genus of man" may be read in several ways: implausible from the perspective of its acceptability, expressing that 'Animal' belongs to 'Man' as an accident (predicational form), or that "Some men are not animals" (particular negative; logical form). The refutation therefore can be accomplished with a proposition like "Animal is the genus of man," which is plausible and acceptable (acceptability), is a proposition expressing the genus (predicational form) and it is a universal affirmative (All men are animals; logical form).

[9] *Topics* VIII, 5: esp. 159a39; The Answerer should know these too: *Topics* VIII, 9; *Topics* VIII, 14; 163a29-b16. On 'strategic rules' for the Answerer see Kakkuri-Knuuttila 2012, 80-87.

[10] "those opinions are reputable which are accepted by everyone or by the majority or by the wise – i.e. by all, or by the majority, or by the most notable and reputable of them." (*Topics* I, 1, 100b20-22) Also, a thesis, or a dialectical proposition "is bound of necessity to be either reputable or implausible or neither; and reputable or implausible either without qualification or else with a restriction, e.g. to some given person, to the speaker, or to some one else." (*Topics* VIII, 5, 159a38-b2). See also: *Topics* I, 4, 101b28-35, *Topics* I, 10, 104a9-11, *On interpretation* 11, 20b21-30 etc.

[11] For discussions about *endoxa*, *adoxa* and *paradoxa*, see Grote 1872, 388 and Smith 1997, xxiii-xxiv, 78.

thesis. If, on the other hand, what is laid down is neither implausible nor reputable, the conclusion will be of the same type as well. (*Topics* VIII, 5, 159b4-8)

We can observe that Aristotle indicates a general rule regarding the choice of premises for syllogisms:

Those who try to deduce from premises more implausible than the conclusion clearly do not deduce correctly (*Topics* VIII, 6, 160a14-16[12])

In addition, the relations between endoxical and adoxical propositions are conceived as relations of contrariety:

Now dialectical propositions consist in asking something that is reputable to all men or to most men or to the wise, i.e. either to all, or to most, or to the most notable of these, provided it is not paradoxical; for a man would assent to the view of the wise, if it be not contrary to the opinion of most men. Dialectical propositions also include views which are like those which are reputable; also propositions which contradict the contraries of opinions taken to be reputable, and also all opinions that are in accordance with the arts. (...) Likewise, also, propositions contradicting the contraries of reputable opinions will pass as reputable; (...) Also, on comparison, it will look like a reputable opinion that the contrary predicate belongs to the contrary subject. (*Topics* I, 10, 104a9-33)

Robin Smith states his concern regarding the fact that it is unclear if these relations of contrariety are between terms or propositions,[13] but in this case it seems that the relation of contrariety between propositions is built upon the relations of contrariety between terms. To explain this, the usual reference is *Topics* II, 7, where Aristotle talks about 'modes of conjunction' and different combinations of contraries result in relations of contrariety:

Table 1.

1	to do good to friends	to do evil to enemies
2	to do evil to friends	to do good to enemies
3	to do good to friends	to do evil to friends
4	to do good to enemies	to do evil to enemies
5	to do good to friends	to do good to enemies
6	to do evil to friends	to do evil to enemies

Aristotle insists that in the case of the first two there is no discussion, because there is no contrariety, both of 1 being preferable, while both of 2 are objectionable (*Topics* II, 7, 113a1-8). However, in the following 4 one of the ways we can read the contraries is as follows: If "Always do good to friends" is

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[12] Cf. with what is required of the premises of a demonstration: "it is necessary for demonstrative understanding in particular to depend on things which are true and primitive and immediate and more familiar and prior to and explanatory of the conclusions." (*Posterior Analytics* I, 2, 71b20-22)
[13] Smith 1997, 79.

reputable, then "Never do good (= do evil) to friends" is not reputable (= implausible) and therefore "Sometimes do good to friends" should also be reputable. But these might rather be thought of as contraries not necessarily from a logical perspective, but rather contraries in terms of what is preferable: if it is reputable to prefer 'doing good to one's friends,' it would not be reputable to prefer 'to do harm to one's friends.'

The discussion on what kind of premises and conclusion are needed for a refutation of the Answerer's thesis to come about from the perspective acceptability or plausibility of the propositions can be summarized in the following manner:

Table 2.

Thesis	Conclusion of the refutation	Premises of the refutation	Reference
Implausible without qualification	Reputable without qualification	Reputable and more reputable than the conclusion	*Topics* VIII, 5, 159b13-15
Reputable without qualification	Implausible without qualification	Reputable or less implausible than the conclusion	*Topics* VIII, 5, 159b18-19
Reputable with qualification/restriction (to a person, a group etc.)	Implausible with qualification (to a person, a group etc.)	Reputable/Implausible insofar as they are less implausible than the conclusion	*Topics* VIII, 5, 159b20-23.
Implausible with qualification/restriction (to a person, a group etc.)	Reputable with qualification	Reputable (more reputable than the conclusion)	

Aristotle says in *Topics* I that the dialectical problem should be about something on which there is disagreement between people (*Topics* I, 11, 104b3-5). These disagreements make dialectical discussions possible, for no one would make a problem (and implicitly choose a thesis to defend) of what is accepted by all or obvious to everyone (*Topics* I, 10, 104a7-8). The problems (and theses) should neither be too difficult or of things that admit no doubt and, therefore, disagreement among people (*Topics* I, 11, 105a7-10).

This can be considered the most basic level of conceiving an opposition between a thesis and the conclusion of its refutation, disagreement between people being at its origin. It can be observed that a concept of contrariety is already present in it. At the next level, or perspective, considered, the contrariety

or contradiction becomes more evident, as in the case of one universal proposition being refutable by a single counter-example, which example may take the form of a particular proposition.

IV. Strategy Based on the Predicational Form of the Thesis

The predicables are specific to Aristotle's account of dialectic. In short, the subject and the predicate of a proposition are to be in a certain relation with one-another: the predicate can be the definition of the subject ("Man is a rational animal;" "Rational animal is the definition of man"), it can be the property of the subject ("Man is capable of laughter;" "Capable of laughter is proper to man"), it can be the genus of the subject ("Man is an animal;" "Animal is the genus of man") or it can be the accident of the subject ("Man is tall;" "Tall(ness) is an accident of man"). For Aristotle every proposition, every problem, indicates a definition, property, genus (differentia is considered generic), or accident[14]. Formulated dialectically: a problem would be "Is rational animal the definition of man or not?"; a dialectical premise: "Is animal the genus of man?"[15]

Predicables can be represented starting from the most difficult to prove and continuing to the easiest or from the easiest to refute to the hardest following Aristotle's account from *Topics* VII, 5. For his purpose, Aristotle discusses definition, property, genus, accident, considered both as universal accident and particular accident.[16] What is interesting enough is that when Aristotle wrote the central books of the *Topics*, i.e. II-VII, he already considered propositions related to each predicable (e.g. propositions expressing a definition, genus, property, accident) refutable based on the relations of contradiction and contrariety. This was possible given the fact that dialectical problems (and dialectical propositions in general) can be expressed in universal or particular, affirmative or negative form, "Every pleasure is good," "No pleasure is good," "Some pleasure is good," "Some pleasure is not good" (these being the examples of Aristotle at the beginning of *Topics* II, 1). Now, these may not seem to be propositions having a predicational form as "Is the good the definition of pleasure?" "Is the good the genus of pleasure?," "Is the good a property of pleasure?," "Is the good an accident of pleasure?" However, the choice of examples made by Aristotle can be explained.

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[14] *Topics* I, 4, 101b16-18; on the number of predicables, see *Topics* I, 12. On the predicables, see for instance: *Topics* I, 5, 8 and Stump 1988, 244-255. Also: *Topics* II, 1, 109a9-26 where a distinction is made between 'belonging in part' (accident – conversion non-necessary) and 'belonging absolutely' (Definition, Genus, property – conversion necessary).

[15] When we said at the beginning that a proposition has a 'predicational-form' we had in mind these predicables. E.g. a proposition has the 'propositional form of a genus' if in it is asserted that its predicate is or is not the genus of its subject: "Animal is the genus of man," "Animal is not the genus of man."

[16] On universal and particular accident see also *Categories* 1, 1a24-1b2.

In the first book of the *Topics* (I, 5) Aristotle mentions that, apart from propositions that express predicables, there are also 'definitory' and 'generic' propositions (of the same nature, yet different from propositions in which the predicates are the definitions or genera of their subjects). A distinction between propositions 'predicational in a strong sense' and propositions that are 'predicational in a weak sense' seems to exist here. A distinction between predicational propositions and propositions of a 'predicational-kind' is stressed in Kakkuri-Knuuttila and Tuominen (2012, 67 sqq., 77 sqq.) in terms of 'strict interpretation' vs. 'flexible interpretation.' As said, Aristotle mentions two types of 'predicable-like' propositions:

1. Definitory:

One may, however, call definitory such a remark as that the beautiful is the becoming, and likewise also of the question, 'Are perception and knowledge of the contraries 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 (*Topics* I, 5, 102a5-10).

2. Generic:

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. (*Topics* I, 5, 102a36-102b1)[17]

Aristotle also indicates that predicable-like propositions are useful for refuting, but not establishing:

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. But 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. (*Topics* I, 5, 102a11-17; cf. *Topics* VII, 1, 2 about what is required for a definition)

Information regarding the difficulty of defending or attacking a proposition based on its predicational form is to be found in the central books of the *Topics*. For instance about definition we find out that:

it will be easier to attack people when committed to a definition. [For an attack is always more easily made on definitions]. (*Topics* II, 4, 111b13-15; cf. *Topics* V, 4, 132a28-132b7).

When one wants to refute a definition one can use in the tactical phase of the dispute *topoi* useful in the case of the other predicables, but not the other

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17 One may wonder whether there are also 'property-like' or 'accident-like' propositions.

way around (*Topics* VI, 1, 139a24-139b5). In addition, definition seems to be considered more sensible for attack because of its composite character:

> when one cannot attack the definition as a whole because the whole is not familiar, one should attack some part of it, if it is familiar and is evidently incorrectly rendered; for if the part is demolished, so too is the whole definition. (*Topics* VI, 14, 151b3-7).

So we have the following five cases:

1. If the thesis is a definition then:

1.1. It can be refuted using either an SoP (easier and preferable) or an SeP (*Topics* VII, 5, 154b3-5) and this needs not to be done against the entire definitional phrase, but is sufficient to be directed either against the proposition that expresses that the predicate is the genus of the subject, i.e. against the genus as part of the definition (e.g. "Man is an animal," 'animal' being the genus of 'man'), or against the proposition that expresses that the predicate is the differentia of the subject, i.e. the differentia as part of the definition (e.g. "Man is rational," 'rational' being the differentia here; *Topics* VII, 5, 154a33-35).

1.2. It also can be refuted if it is shown that the definition does not apply to some of the things defined (*Topics* VII, 5, 154b5-11) or applies to more things than those defined (*Topics* VII, 5, 154b11-12) or if convertible, it is not convertible as essence (*Topics* VII, 5, 154a29-31).

2. Property:

2.1. Since property is, as the definition, a phrase (e.g. 'capable of laughter' is a property particular to man), only one part of it is enough to be refuted in order to refute it entirely. It can also be refuted by means of SoP (easier and thus preferable) or SeP. (*Topics* VII, 5, 154b13-14).

2.2. The property also needs to be convertible as a property, not as a definition (*Topics* VII, 5, 154b14-21. *Topics* I, 8, 103b6-17). As in the case of definition, if it is proven that the property applies to more things than the ones designated or does not apply to some of the things designated by it then it is refuted (*Topics* VII, 5, 154b22-24).

3. Genus:

3.1. For refutation: it is shown that the predicate as genus does not hold of any of the things designated by the subject, i.e. by an SeP.

3.2. Or that it belongs as a genus only to some (SoP) (*Topics* VII, 5, 154b25-26, 29-30).

4. Universal accident:

4.1. For refutation: it is shown that the predicate does not belong as an accident at all (SeP).

4.2. It is shown that the accident does not belong in at least one case (SoP) (*Topics* VII, 5, 154b35-36).

5. Particular accident: can be refuted only if it is shown that the predicate does not belong as accident in any case (SeP) (Topics VII, 5, 154b37-155a2).

This is represented systematically in Table 3.

Table 3.

Pred.	Purpose	Methods	Reference
DEF.	Establish	each of the two constituent elements, i.e. the genus and differentia, of the definition need to be established	*Topics*, VII, 5, 154a24-29, 35-37
		Definition can only be established through a deduction with universal conclusion	*Topics*, VII, 5, 154a37-154b1
		The definition needs to be convertible with the defined object	*Topics* VII, 5, 154b2-3. *Topics* I, 8, 103b4-10.
	Refute	Definition can be overthrown by overthrowing one of its components, i.e. the genus or the differentia	*Topics* VII, 5, 154a33-35.
		Definition can be overthrown by proving that a particular does not belong (SoP). Also by SeP.	*Topics* VII, 5, 154b3-5
		1. If the essence of the thing would be also designated by something else than the definition, then the definition is refuted because only by definition can the essence be designated. 2. Definition applies to more things than those designated and therefore is not convertible.	*Topics* VII, 5, 154a29-31 *Topics* VII, 5, 154b11-12
PROP.	Establish	the property being a complex phrase, each component has to be proven to belong	*Topics* VII, 5, 154b13-14
		As in the case of definition, the deduction needs to be universal (SaP)	
		The property also needs to be convertible.	*Topics* VII, 5, 154b14-21. *Topics* I, 8, 103b6-17
	Refute	Only one part of the parts of the complex phrase has to be refuted (by SoP or SeP)	*Topics* VII, 5, 154b16-17, 21-22
		SoP or SeP	
		The property belongs also to other things than those designated by the complex phrase, therefore is not convertible.	*Topics* VII, 5, 154b22-24.
GEN.	Establish	The Genus belongs in each case; The Genus belongs as a Genus	*Topics* VII, 5, 154b24-25, 27-28
	Refute	SoP, SeP	*Topics* VII, 5, 154b25-26, 29-30
UN.	Establish	SaP – need to prove that it belongs in every case	*Topics* VII, 5, 154b34-35

ACC.	Refute	SoP or SeP	*Topics* VII, 5, 154b35-36
P. ACC.	Establish	SiP	*Topics VII, 5, 154b36-37* *Topics* VII, 5, 154b37-155a2 Also *Topics* II, 1, 109a9-26. Accidents do not need to be convertible.
	Refute	SeP	

The next perspective, the one based on the logical forms of the thesis and of the conclusion of the refutation, is the most regimented of the three main perspectives that we consider here and it is presented in the context of Aristotelian syllogistic. The main discussion about it is to be found in the first book of the *Prior Analytics* and this suggests that there is a direct relation between the *Topics* and the theory of syllogism developed in the *Prior Analytics*.

V. Strategy Based on the Logical Form of the Thesis

This next way the Questioner can plan his strategy is based on what we called the logical form of the thesis. Aristotle already conceived the refutation of dialectical propositions or theses in terms of contrariety between universals or contradiction between universals and particulars in the context of predicables[18] or as opposition in the case of the acceptable/not acceptable or plausible/ implausible character of a proposition, as seen in the previous two sections.

The general idea resulting from this is that universals are easier to refute than particulars, which is commonsensical. Speaking of the difficulty of refuting or grounding a proposition, in *Topics* VIII, 3, Aristotle talks about theses that are δυσεπιχείρητα 'more difficult to approach' and εὐεπιχείρητος 'more easy to approach.'[19] A similar discussion appears in the *Prior Analytics* I, 26, as Robin Smith points out (Smith 1997, 125). There, the discussion about the ease or

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[18] Or in *Topics* II, 3, 110a23-110b7: "if we want to establish a statement, we shall prove that in one use the attribute belongs, if we cannot show it of both; whereas if we are overthrowing a statement, we shall prove that in one use the attribute does not belong, if we cannot prove it of both. Of course, in overthrowing a statement there is no need to start the discussion by securing any admission, whether the attribute is said to belong to all or to none of something; for if we prove that in any case whatever the attribute does not belong, we shall have demolished the universal assertion of it, and likewise if we prove 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."; again in *Topics* III, 6, 119a32-36: "If the problem is 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 prove it in particular; for if it belongs to all, it belongs also to some, and if to none, not to some."

[19] This is Robin Smith's translation. 'δῠσεπιχείρητος' can be encountered in the *Topics* VIII, 3, 158b5; *Topics* VIII, 3, 158b16; *Topics* VIII, 3, 159a3.

difficulty to refute propositions is provided from the perspective of the logical form of the categorical propositions. As a difficulty-criterion, we are presented with the following:

> that which is concluded in many figures and through many moods is easier (ῥᾷον); that which is concluded in few figures and through few moods is more difficult (δυσεπιχειρητότερον) to attempt. (*Prior Analytics* I, 26, 42b30-32).

Considering this, we can summarize the contents of the chapter 26 from the first book of *Prior Analytics* in the following manner:
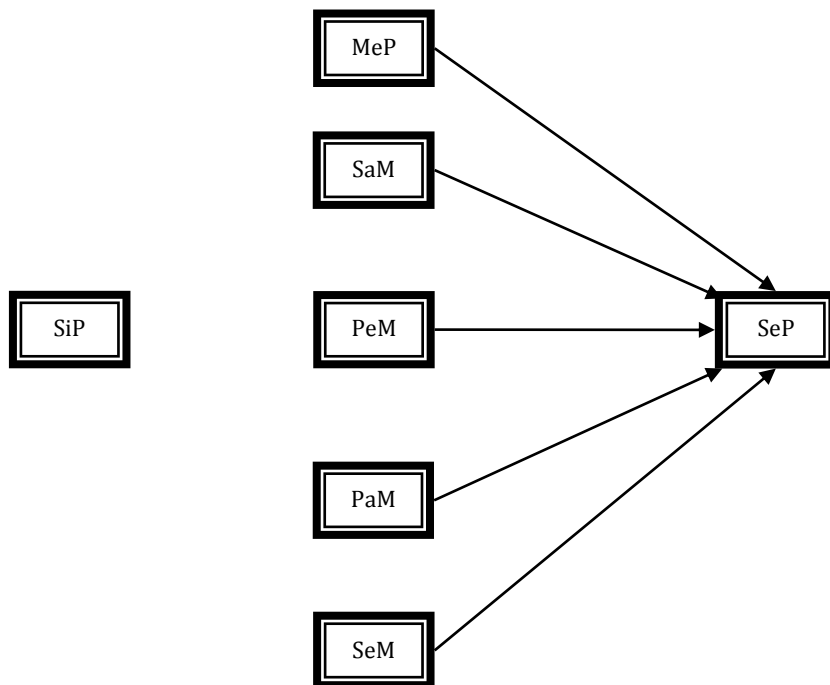
Table 4.

P	Establish by (from hardest to easiest)	N.	Refute by (from easiest to hardest):	N.
SaP	1st figure - Barbara	1	1st figure – Celarent, Ferio; 2nd figure Cesare, Camestres, Festino, Baroco; 3rd figure Felapton, Bocardo, Ferison	9
SeP	1st figure – Celarent; 2nd figure – Cesare Camestres	3	1st figure – Barbara, Darii; 3rd figure – Darapti, Disamis, Datisi	5
SiP	1st figure – Darii; 3rd figure – Darapti, Disamis, Datisi	4	1st figure – Celarent; 2nd figure – Cesare, Camestres	3
SoP	1st figure – Ferio; 2nd figure – Festino, Baroco; 3rd figure – Felapton, Bocardo, Ferison	6	1st figure - Barbara	1

For example, in the case of a refutation of SoP we would have something similar to this (MaP and SaM can be grounded by deduction from other universals, or by induction):

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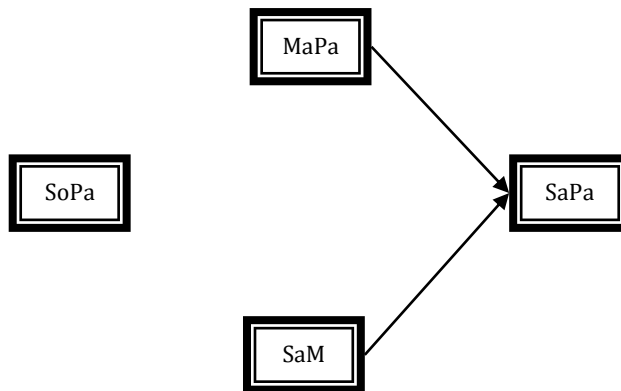
In the case of a refutation of a SiP we would have the following (SaM can be used in two cases,[20] for a Celarent and for a Cesare; in this case also, the universals can be established either by deduction either by induction).

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                              ┌─────┐
                              │ MeP │
                              └─────┘

                              ┌─────┐
                              │ SaM │
                              └─────┘
                                                      ┌─────┐
  ┌─────┐                     ┌─────┐                 │ SeP │
  │ SiP │                     │ PeM │ ───────────────▶└─────┘
  └─────┘                     └─────┘

                              ┌─────┐
                              │ PaM │
                              └─────┘

                              ┌─────┐
                              │ SeM │
                              └─────┘
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[20] We can say that this kind of proposition is more dangerous to the Answerer than the rest because, if accepted, it can be used in two combinations. If he cannot be on the lookout of all the universals, he should at least focus his attention on rejecting the more dangerous ones. And vice versa, if he manages to reject those propositions with a relevant counter-example, then his position improves. Aristotle does not provide any distinction of this kind, but it might be useful to follow it through. For example, if the plan is to refute a SaP, with a possible refutation which would have as a conclusion either SeP or SoP, and if we would order the premises that the Answerer should avoid conceding (taking the perspective of the logical form) from the most dangerous, because usable in more possible syllogisms, to the less dangerous, then we would have to consider the following ten types of premises: MeP (usable in Celarent, Ferio, Felapton, Ferison), SiM (usable in Ferio, Festino), SaM (usable in Celarent, Cesare), PeM (usable in Cesare, Festino), PaM (usable in Camestres, Baroco), MaS (usable in Felapton and Bocardo), SeM (usable in Camestres), MoP (usable in Bocardo), SoM (usable in Baroco), MiS (usable in Ferison), which each, if accepted by the Answerer, may bring about a refutation by SeP or SoP. So, the Answerer should be on the look-out especially for premises of the MeP type. In the case of the SeP type as a thesis, a refutation with an SaP or SiP type of proposition as conclusion is needed. To reach this conclusion, six kinds of premises can be used: MaP (usable in Barbara, Darii, Darapti, Datisi), MaS (usable in Darapti, Disamis), SaM (usable in Barbara), SiM (usable in Darii), MiP (usable in Disamis), MiS (usable in Datisi) and so on. Of course the argument map becomes more complex if we add the auxiliary premises needed to ground these main premises.

In light of this it seems clear that the discussion regarding the ease or difficulty to establish or to refute a proposition in the *Prior Analytics* can be properly understood only if we relate it to the dialectical context. For instance, if the Answerer has to defend a thesis of the SoP type, then both the participants should know that the Answerer can be refuted after a refutation with a conclusion of the SaP form has been brought about based on his concessions. Therefore, within the rules of the dialectical encounter, the Answerer should do his best not to concede two affirmative universals as main premises or premises that will ground universal main premises. The strategy of the Questioner is clear, since he does not really have enough space for maneuvering. In this specific case the job of the Answerer is easiest because all he needs to do is to prepare counter-examples for those propositions.

But imagine the plight of the Answerer who has chosen a thesis of the SaP type: things become thus much more difficult for him. He should realize that the Questioner will have at his disposal many more venues of attack, as many as the moods to establish SeP and SoP, i.e. 9 ways (combinations of premises). The Questioner therefore can use any of these moods in order to build up a refutation. And to do this he only needs to shuffle his question ordering[21] so as to be able to obtain relevant concessions.[22] Both the Questioner and the Answerer should know these because they need to be able to argue or counter-argue on any thesis and to follow parallel lines of argument.[23] If one cannot follow, then he will most likely commit a mistake and risk refutation:

> 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 of attack, and the more plentiful the material, the quicker a deduction comes; for there is more likelihood of a mistake occurring in a large than in a small number of things. (*Topics* VII, 5, 155a3-6).

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[21] Aristotle recommends this: *Topics* VIII, 1, 156a23-26.

[22] For example *Topics* VIII, 1, 156a 23-26. The Answerer cannot refuse to answer questions without justification (*Topics* VIII, 2, 158a28-30).

[23] E.g. "In dealing with any thesis, 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 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 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 statement. 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 rightly 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." (*Topics* VIII, 14, 163a36-b16)

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We can understand better this fragment now if we link it to what we have just observed about universals. Since a definition can be refuted by showing that either the predicate does not belong to the subject either as a genus or as a property, both these being universals, we can imagine that the difficulty for the Answerer is doubled because the Questioner has at his disposal 9 ways to refute the Genus SaP, respectively 9 ways to refute the Differentia SaP.[24]

VI. An Example from Plato

In what follows a short illustration of the possibility of strategic planning on behalf of the Questioner will be provided. The example consists of a short dialectical sequence found in Plato's *Charmides*, in which Socrates refutes Charmides' second attempt to define 'temperance':

> He paused and, looking himself very manfully, said, 'Well, temperance (σωφροσύνη) seems to me to make people ashamed and bashful, and so I think modesty (αἰδὼς) must be what temperance really is.'
> 'But,' I said, 'didn't we agree just now that temperance was an admirable thing?'
> 'Yes, we did,' he said.
> 'And it would follow that temperate men are good?'
> 'Yes.'
> 'And could a thing be good that does not produce good men?'
> 'Of course not.'
> 'Then not only is temperance an admirable thing, but it is also a good thing.'
> 'I agree.'
> 'Well then,' I said, 'you don't agree with Homer when he said that *modesty is not a good mate for a needy man*?'
> 'Oh, but I do,' he said.
> 'So it seems to be the case that modesty both is and is not a good.'
> 'Yes, it does.'
> 'But temperance must be a good if it makes those good in whom it is present and makes bad those in whom it is not.'
> 'Why yes, it seems to me to be exactly as you say.'
> 'Then temperance would not be modesty if it really is a good and if modesty is no more good than bad.'
> 'What you say has quite convinced me, Socrates,' he said. (*Charmides* 160e-161b)

1. Firstly, if we take into account the acceptability or plausibility of the thesis, premises and the conclusion of the refutation we should take things in a reverse manner, because we are far removed historically to know right from the start what could have been counted as a plausible/reputable opinion or *endoxon* and what is not. So, we should start with the conclusion: "Temperance is not

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[24] Cf. everything treated in this section with what Aristotle writes in *Prior Analytics* II, 8-10. Robin Smith indicates that is hard to understand why Aristotle gives any weight to conversions, but speculates that an explanation can be given by referring to a dialectical context (Smith 1997, 197).

modesty." It seems that the Greeks considered αἰδώς and σωφροσύνη distinct, the first being more like an emotion, the second being more like a rational ability to take things into consideration.[25] So, a proposition maintaining that they are different can be considered acceptable, plausible, i.e. *endoxon*. Next, if we pass to one of the premises important in Socrates' argument, "Temperance is always good," we can follow Guthrie (1975, 165, n. 2) and consider it an *endoxon* because no ordinary man would deny this (as in the case of excellence for instance). Also, if we consider the other premise, the particular one which overthrows Charmides' definition, "there is a kind of modesty which is not good," this is also reputable or plausible, i.e. *endoxon* (since it is based on the authority of Homer and there is no serious reason to doubt that this Homeric dictum would have been taken otherwise than an *endoxon* – thus the eager acceptance of it by Charmides).[26] At this point we can see that we have an acceptable conclusion, based on acceptable premises. If we go back to what Aristotle has to say about refutation based on the acceptability of the thesis (table 2 *supra*), we can see that the thesis, since it equates two things that were considered distinct by an eventual majority, based on authoritative texts by Homer for example, can be considered to be *adoxon*, i.e. implausible. Thus, in this case, we might consider that a thesis that is *adoxon* is refuted by an argument with premises and conclusion that can be considered *endoxa*.[27]

2. Let us pass on to the next perspective, concerning itself with the predicational form of the thesis. The purpose of Charmides is to define. But his thesis has the following form: "Temperance is modesty." If we refer to the distinction stressed in Kakkuri-Knuuttila and Tuominen (2012, 67 sqq., 77 sqq) then we can observe that here we do not a have a formulation of the type: "Modesty is the definition of temperance." (or at least a part of the definition of temperance) or the "The definition of temperance is the definition of modesty." Thus we can consider that this thesis has a predicational form in a weak sense, being formulated as "Temperance is modesty." If we consider what Aristotle has to say, in order to infirm the equation between temperance and modesty, one can show that there is a particular case where temperance is not modesty or modesty is not temperance (see table 3 *supra*), which Socrates eventually does by letting Charmides accept the particular case from Homer where modesty is a bad thing. So, temperance being always good and modesty sometimes good and sometimes bad, a refutation comes about.

3. In the case of the reading based on the logical form, things are a bit more complicated. To fit Plato's dialogues into a procrustean syllogistic reading is something that might involve a certain amount of methodological errors as the

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[25] See the excellent discussion in Rademaker 2005, 50-54.
[26] Homer, *Odyssey* XVII, 347. Also: Hesiod, *Works and Days* 316-318.
[27] Of course, Aristotle said that the premises need to be more plausible/acceptable than the conclusion. But at this point I do not think that we have a way to discern between *endoxa* in this respect.

one of anachronistic reading. The syllogism by which Charmides is refuted has been read in the following manner:

Major Premise: Modesty is not good.

Minor Premise: Temperance is good.

Conclusion: Temperance is not modesty.

Lutoslawski considers this to be a Cesare (Lutoslawski 1897, 203), i.e. the reading becomes: No modesty is good; All temperance is good; No temperance is modesty. This seems to be consistent with the advice given by Aristotle: if the thesis is SaP, then it can be refuted either by a refutation with a conclusion of the SeP or SoP type, Cesare having an SeP conclusion (see table 4 *supra*). But this reading seems odd, because it is obvious that Socrates convinces Charmides that in some cases modesty is good, in others (as in the reference to Homer's *Odyssey*) it is not. Therefore, the major premise should run like: "Some modesty is not good"[28] instead of "No modesty is good." But this would imply that the conclusion will also be a particular: "Some temperance is not modesty." And we would have a syllogism of the type: Some modesty is not good, all temperance is good, some temperance is not modesty, an OAO type of syllogism. But the only OAO valid syllogism is in the third figure, i.e. Bocardo, and not in the second. This would be fallacious then.[29] But that should not really be the case. There are no rigid rules regarding which of the conceded propositions should be considered as major or minor premises in the refutational syllogism. If we apply the principle of charity here, then the syllogism can run as follows: All temperance is good, some modesty is not good, therefore some modesty is not temperance. Then, this yields a valid Baroco of the second figure.[30] If we check table 4 from above, then we can observe that Baroco is a type of syllogism that can be used to refute a universal.

So, to wrap things up, in this particular case, if it can rightly be considered that the thesis of Charmides was of the *adoxon* type, definitory in its predicational form and universal affirmative from the perspective of its logical form, we can consider that the mission of Socrates was fairly simple.

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[28] Novak (2003, 4, n. 6) suggests that a reduction has been operated from "Modesty is good and is not good" to "Modesty is not a good" by the law "if (p & not-p), then not-p," p being "Modesty is good." This might seem plausible, but without textual evidence we cannot take this to actually be the case in the text, although it will surely be helpful to find a rule like this among the ones presented in the *Topics*.

[29] There seem to have been scholars who considered the syllogism underlying Plato's text fallacious. See Guthrie 1975, 165, n. 2.

[30] Clarification on this point was possible with the valuable help of Leon Geerdink, my initial inclination being to consider the syllogism a fallacy.

VII. Concluding Remarks

To sum up, we can illustrate the two extremes when it comes to theses in terms of difficulty to defend or to attack:

I. If the Answerer has chosen a thesis that is a definition and it is adoxical/implausible then the Questioner is at advantage: 1. He will need a refutation with a conclusion that is endoxical and thus will be able to secure more easily usable premises from his opponents. 2. He will be able to refute the definition if he attacks the genus or the differentia; 3. the genus and differentia being universal propositions (All humans are rational, all humans are animals) he will have 9x2 moods to attack the definition; it is evident that in this case it will be extremely hard for the Answerer to follow the line of argument without making a mistake.

II. If the Answerer has chosen to defend a thesis that "X is not the accident of Y" and which is also endoxical of the type accepted by most people, then the job of the Questioner will be extremely hard because he will need: 1. a refutation with an implausible/adoxical conclusion, meaning it will be hard for him to obtain usable premises (at least one implausible concession being needed); 2. He will have only one way to attack, by means of a universal affirmative, and therefore the Answerer's job will be as easy as possible because he will be able to follow the argument with the lowest risk of error.

It can be observed that the divinatory powers of a good Questioner amount to a trained skill to foresee what is needed in a dispute in order to reach a refutation. And this explains the dialectical practice only in part, because there is still enough wonder left about the way the skilled Questioner (e.g. Socrates) chooses to present his questions, in what order, or the manner in which he leads his interlocutor through the entanglement of the dialectical discussion. The present considerations are referring only to the initial phase of strategic planning. In what follows next in the dispute, the Questioner, after his initial strategic plan should do the following: 1. Based on what auxiliary premises he needs to establish the main premises and on strategic rules found in the Eight Book of the *Topics*, he should order his questions in such a manner that it will be hard for the Answerer to follow the line of argument and thus make the Answerer more inclined to concede needed premises; 2. He should choose his premises from an endoxical point of view based on any lists and tables he has.[31] 3. Next, based on the predicational form of the thesis/anti-thesis he should know what *topoi* he can employ in the dispute in order to secure concessions from the Answerer. He will know, for instance, that if he has to attack a definition, he can also use the *topoi* of genus, property or accident, but if he wants to attack a proposition expressing an accident, the *topoi* of definition are useless (see *Topics* VII, 5). 4. In concert with these, based on the logical form and predicational form of the thesis/anti-thesis he should know what logical form and what

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[31] For this see *Topics* I, 14, 105b12-15; also Smith 1997, xxiii-xxiv.

predicational form should the main premises and the auxiliary premises have and what kind of *topoi* he should employ to reach each.

This heuristic advice given by Aristotle seems to be applicable to some extent to dialectical sequences present in Plato's dialogues. In future papers the applicability of a reading of this sort will be tested further.

Appendix: On the Status of the Most Definite Theses

A peculiar case which does not seem to conform to the hierarchical view described in the article, where universals and definitions are the easiest to refute and the hardest to defend, seems to appear in the 3rd book of the *Topics*. It relates to definiteness (or definite character) of the thesis. At the beginning of the *Prior Analytics*, propositions are said to be of three kinds: universals, particulars and indefinite. Indefinite is the statement in which something is said "that it does or does not belong, without any mark of being universal or particular, e.g. "Contraries are subjects of the same science," or "Pleasure is not good" (*Prior Analytics* I, 1, 24a19-22). In the *Topics* we are provided with a more detailed view on the way in which statements are refuted based on their definiteness:

> If the problem is indefinite, it is possible to overthrow it in only one way; e.g. if a man has asserted that some pleasure is good or is not good, without further definition. For if he has asserted that some pleasure is good, you must prove universally that no pleasure is good, if the proposition in question is to be demolished. And likewise, also, if he has asserted that some pleasure is not good you must prove universally that all pleasure is good: it is impossible to demolish it in any other way. For if we prove that some 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, whereas it can be established in two ways; for whether we prove universally that all pleasure is good, or that some pleasure is good, the proposition in question will have been proved. Likewise, also, supposing we are required to argue that some pleasure is not good, if we prove that no pleasure is good or that some pleasure is not good, we shall have produced an argument in both ways, both universally and in particular, to show that some pleasure is not good. If, on the other hand, the thesis is definite, it will be possible to demolish it in two ways; e.g. if it is maintained that it is an attribute of some pleasure to be good, while of some it is not; for whether it is proved 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 proving 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 thesis is still more definite (διορισθείσης),[32] e.g. that prudence alone of the virtues is knowledge, there are four ways of demolishing it, for if it is proved that all virtue is knowledge, or that no virtue is, or that some other virtue (e.g.

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[32] J. Brunschwig notes that the meaning this term has here is different from the one found in the *Prior Analytics* I, 1 24a17-22 (Brunschwig 1967, 77, 163-164).

justice) is, or that prudence itself is not knowledge, the proposition in question will have been demolished. (*Topics* III, 6, 120a6-31)

Thus we have two kinds of propositions: indefinite and definite, the latter having degrees of 'definiteness.' The general rule by which we can consider the ease or difficulty to refute or establish a thesis is linked to these degrees: the more definite the thesis, the easier to refute. We have the following:

Table 5.

Thesis (all different kinds of particular propositions)	Form[33]	Refutation by
Indefinite: affirmative form	'at least some S are P'	SeP.
Indefinite: negative form	'at least some S are not P'	SaP.
Definite: exclusive generic	'only some S are P'	SaP, SeP.
Definite: exclusive specific	'only one S is P; and at least one S is not P'	SaP, SeP, at least two S's are P.
Definite: exclusive singular	'only a is an S that is P; and at least one S is not P'	SaP, SeP, b is not a and b is an S that is P, a is not P, [a is not an S].

It is certain that indefinite propositions are refuted by universals because it does not matter what form they take if a quantifier is added, they remain refutable in this way (e.g. if an indefinite proposition becomes SaP by adding the universal quantifier then we can refute it by SeP or SoP; if, on the other hand, it becomes SiP, then it will be refuted only by SeP; therefore it is always refuted by SeP).

In the case of definite propositions their exclusive character can be seen as similar to the exclusivity of the property or definition. If we consider this conjointly with what was seen in the sections dealing with the predicational form and logical form of the thesis, then we can conclude that the easiest to overthrow and hardest to defend type of proposition is the definite exclusive singular one. However, it seems highly unlikely that anyone should opt to defend a thesis of this type, save maybe for Meletus, when he insists that "Socrates alone corrupts the youth" (*Apology* 25a).[34,35]

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[33] Brunschwig 1967, 163-164.

[34] Brunschwig (1967, 164) states that Aristotle, in his definitive logic, abandoned these distinctions between different kinds of definite particulars.

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