

STÉPHANIE GRÉGOIRE

THE DIALECTICAL TOOLS : THEORY AND PRACTICE

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Les instruments dialectiques: théorie et pratique

Résumé

Cette thèse a pour but d'éclairer la conception qu'Aristote se fait de la nature et de l'utilité des instruments dialectiques, ainsi que de contribuer à établir l'existence d'une cohérence entre sa théorie logique et sa pratique philosophique. Une fois les instruments situés dans les *Topiques*, nous nous pencherons sur la présentation qu'Aristote fait du syllogisme dialectique et des buts de la méthode dialectique. Nous examinerons ensuite les chapitres qu'il consacre aux instruments, puis nous proposerons de ces derniers une définition plus essentielle et complète que celle qui leur a été assignée jusqu'à maintenant. Ceci fait, nous examinerons l'usage qu'Aristote fait des instruments dans des parties des traités *De l'Âme* et de la *Métaphysique*.

Les instruments dialectique: théorie et pratique

Résumé

Cette thèse vise à éclairer la conception qu'Aristote se fait de la nature et de l'utilité des instruments dialectiques, ainsi qu'à contribuer à établir l'existence d'une cohérence entre sa théorie logique et sa pratique philosophique. Le premier livre des *Topiques* est unanimement considéré comme l'introduction d'Aristote à sa méthode dialectique. Ainsi, une certaine familiarité avec ce livre est nécessaire à quiconque entreprend d'étudier un de ses éléments fondamentaux, comme les instruments. C'est à son examen que la première partie de la thèse est consacrée. Après avoir situé les instruments dans les *Topiques*, nous nous pencherons sur le proème d'Aristote (I,1-3); surtout sur la présentation de l'argument dialectique et des buts de la dialectique. Car c'est à procurer de tels arguments que les instruments sont dits servir, et c'est l'usage qu'Aristote fait de la méthode en vue d'une desdites utilités que nous étudierons plus loin. Nous examinerons ensuite les chapitres consacrés aux parties de l'argument dialectique (I,4-12). Les prédicables constituent les énoncés qui seront posés comme problèmes dialectiques ou assumés comme prémisses dialectiques. Or, c'est précisément parce que les instruments fournissent de telles prémisses qu'ils permettent d'abonder en arguments aptes à résoudre de tels problèmes. Ces arguments peuvent être des syllogismes ou des inductions. Nous analyserons ensuite l'exposé qu'Aristote fait des quatre instruments (I,13-18). Après quoi, nous en proposerons une définition plus essentielle et complète que celle qui leur est habituellement assignée. Ils sont en effet décrits par Aristote et par ses exégètes seulement en rapport avec l'abondance qu'ils assurent en arguments. Or selon nous, on touche davantage leur essence en en parlant comme de *capacités ordonnées à l'obtention de prémisses probables*. Dans la deuxième partie de la thèse, nous examinerons l'usage qu'Aristote fait des instruments dans certaines parties du *traité De l'Âme* et de la *Métaphysique*. Nous serons ainsi en mesure de vérifier que, quand il argumente dialectiquement, il emploie effectivement les instruments tels qu'il les a décrits dans les *Topiques* et tels que nous les avons expliqués. Enfin, nous proposerons quelques explications de l'usage qu'Aristote fait des instruments dans les passages analysés qui paraissent pourtant relever davantage du savoir que de la dialectique.

The Dialectical Tools: Theory and Practice

Summary

The purpose of this dissertation is to clarify Aristotle's conception of the nature and utility of the dialectical tools, as well as to help in establishing proof for the existence of a coherence between his logical theory and his philosophical practice. The first book of the *Topics* is unanimously considered to be Aristotle's introduction to his dialectical method. Thus, a certain familiarity with this book is necessary for whomever undertakes a study of one of its fundamental elements, such as the tools. The first part of the dissertation is, therefore, devoted to this task. After situating the tools in the *Topics*, we will study Aristotle's proemium (I,1-3), especially as concerns the presentation of the dialectical argument and the goals of dialectic. For it is in order to procure such arguments that the tools are said to be useful, and it is how Aristotle uses the method for one of the aforesaid purposes that we will be studying later. We will then examine the chapters devoted to the parts of the dialectical argument (I,4-12). Among these are the predicables, which enter into the constitution of the propositions that will be laid down as dialectical problems, or taken as dialectical premises. Now, it is precisely because the tools furnish such premises that they allow us to obtain an abundance of arguments apt to solve such problems. These arguments can be syllogisms or inductions. We will next analyze Aristotle's presentation of the four tools (I,13-18). After which, we will propose a more essential and complete definition of them than is usually assigned. They are in fact described by Aristotle and his commentators in terms of the abundance of dialectical arguments they serve for. To my mind, however, it is better to speak of them as *abilities ordered to obtaining probable premises*. In the second part, we will examine the use made of the tools in certain sections of the *De Anima* and the *Metaphysica*. We will thus be in a better position to verify that when he is arguing dialectically, he is really using the tools as he described them in the *Topics* and as we explained them. Finally, we will propose a few explanations of the use of the tools in those passages where it seems that it is more a question of knowing than of dialectical reasoning.

Pour mes parents, Constance et Bruno

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The scene is at a German University several centuries ago. A new student comes to see the famous Dr. Faust to ask advice about his studies. He is met instead by Mephistopheles pretending to be the good Doctor:

Mephisto. A child upon its mother's breast
At first will not nurse willingly,
But soon it feeds with utmost zest.
Just so at Wisdom's bosom, learning,
You'll find each day brings deeper yearning.

Student. About her neck I'll cling with pleasure.
But tell me how to gain this treasure.

Mephisto. Ere you proceed with further views
Declare which faculty you'll choose.

Student. I wish to grow profound in learning;
To grasp what's on the Earth I'm yearning,
And things in Heaven-both me attracted-
Nature, I mean, and Science too.

Mephisto. You're on the proper track; but you
Must not permit yourself to be distracted.

Student. With soul and body I shall try.
Of course, sometime I'd like some leisure,
Some liberty for pastime by and by
When summ'ry days invite to pleasure.

Mephisto. Use well your time! It swiftly on goes speeding.
But time is gained, strict order heeding.
Hence let me counsel you, good friend,
At first a course on Logic to attend.
There will your mind be drilled and braced,
In Spanish boots so tightly laced
That more deliberately- oh, you'll be taught!-
It creeps along the lane of thought,
And not with flickering, fitful glow
Like will-o-wisps leap to and fro.
Next you'll be taught for many a day
That what at one stroke, straightaway,
Was done with ease like eating, drinking free,

Must now be done by: One! Two! Three!
You see, it's with the fabric of thought
As with a masterpiece by weavers wrought.
One treadle starts a thousand threads
And shuttles go hither and thither flying,
Darting unseen, blending and tying;
One stroke a thousandfold aggregate weds.
The man of Logic comes and he
Begins to prove that this it be:
The first is so, the second so,
Wherefore the third and fourth are so.
But lacking the first and second, you see,
The third and fourth could never be!
Scholars ev'rywhere extol and believe it;
Though not one has yet shown how to weave it.
Who would now the living thing and describe its
merit
Seeks first to drive out its spirit.
This done, he holds all the parts in his hand;
But these, alas, have no spiritual band!
The chemists call it encheiresin naturae,
Make mock of themselves, yet know not why.

- Student. I fell, I'm not quite comprehending.
- Mephisto. Soon you'll improve in understanding,
Once you have learned how one reduces
And classifies things and their uses.
- Student. I'm so befuddled by what you've said
As if a millwheel turned round in my head.
- Mephisto. And next, 'mong other things to mention,
To Metaphysics then devote attention,
And see that you profoundly scan
What ne'er was meant for human brain.
For what goes in-or won't go-in the head
A pompous phrase oft serves instead.

Goethe, Faust

INTRODUCTION

A time-honored tradition, supposedly going back to Andronicus of Rhodes and followed by most commentators since, has accorded to the collective logical works of Aristotle the name ὄργανον ('Tool').

Now, as a tool is something whose whole essence is to be subordinated to, or to serve something else in the accomplishment of an end or goal, logic was called a tool because its whole purpose was to help reason to operate more perfectly and more efficiently in the philosophical sciences. It does this principally by furnishing tools to them. And that is why not only logic as a whole is called a tool, but also its various subjects, such as definition, enunciation, syllogism, etc. Each of these exists with a view to accomplishing some specific task for the mind: the definition is useful for understanding what a thing is, the enunciation is necessary to apprehend the true and the false; and the syllogism, as well as the other forms of reasoning, serve to discover one truth starting with others.¹ We can, therefore, say that logic is both a tool and about tools.²

¹ 'Syllogismus est ut instrumentum quoddam deveniendi de noto ad ignotum' (Albert the Great, *In Top.* 234a). Alexander of Aphrodisias also calls the syllogism a tool: δείκνυσιν ὁ Ἀριστοτέλης ὅτι ὄργανόν ἐστιν ὁ συλλογισμός. He reasons from part of the definition to its being a tool (*In Top.* 9.20-29). In *Cra.* 388b-c, Plato speaks of the word or name as a tool. In *Resp.* IX 582d, he seems to speak of arguments by which we judge as tools. And he also speaks of the discourse by which, when dividing, we hunt down what a thing is as a tool: see *Soph.* 235b.

² 'scientiae speculativae, ut patet in principio *Metaphysicae*, sunt de illis quorum cognitio quaeritur propter se ipsa. Res autem, de quibus est logica, non quaeruntur ad cognoscendum propter se ipsas, sed ut adminiculum quoddam ad alias scientias. Et ideo logica non continetur sub speculativa philosophia quasi principalis pars, sed sicut quiddam reductum ad philosophiam speculativam, prout ministrat speculationi sua instrumenta, scilicet syllogismos et diffinitiones et alia huiusmodi, quibus in scientiis speculativis indigemus. Unde secundum Boethium in Commento super Porphyrium non tam est scientia quam scientiae instrumentum.' Aquinas, *In Both de Trin.* q.5. a.1. ad 2.

This name *Organon* is certainly in keeping with the nature of logic as conceived by Aristotle, and many indications in his works justify its use. For example, the absence of logic in his classification of the sciences (*Metaph.* VI 1; XI 7),³ and a certain number of texts affirming that it is necessary, before approaching any science, to acquire a propaedeutic and methodological formation.⁴ Nonetheless, Aristotle himself never used this word to characterize logic as a whole, or to speak of things such as definition, syllogisms and enunciations.⁵ Indeed, almost his only use of the word ὄργανον in an intellectual sense is to designate the elements of the dialectical method introduced for the first time in Chapter Thirteen of Book One of the *Topics*: the abilities to take (or choose) premises, to distinguish in how many ways [words] are said, to find differences and to examine likeness.⁶

Furthermore, the Peripatetics almost certainly supported their use of *Organon* for logic as a whole by means of a parallel between two classifications in Book One of the *Topics*. In Chapter 11, Aristotle distinguishes practical problems, theoretical problems, and problems whose solution serves as an aid to solving the preceding ones. Then, in Chapter 14, he divides the premises and problems into 'ethical', 'physical' and 'logical' ones. Now, the superposition of these two classifications by many of the ancient commentators suffices for determining the status of logic as *Organon*.⁷ Thus, Alexander of Aphrodisias starts the proemium to his commentary to the *Prior Analytics* by asking if logic is a part or a tool of philosophy:

³ This division is recalled in two places in the *Topics*: VI 6.145a15 and VIII 1.157a10.

⁴ *Metaph.* IV 3.1005b2-5; 4.1006a5-8. Aristotle mentions here the knowledge of the *Analytics* and of demonstration, and he was certainly thinking, among other things, of logic in II 3.995a12-14. This is how Alexander interprets the passage, saying that it is necessary to acquire competence in reasoning and demonstration before undertaking to do science: see *In Metaph.* 168.21-169.1.

⁵ In regard to the enunciation, Aristotle uses *organon* rather to deny that it is a natural tool: see *Int.* 4.17a1. This denial may be motivated by the desire to refute the position in Plato's *Cra.* that words signify naturally.

⁶ In another case, Aristotle comes close to calling dialectic itself a tool. In *Top.* VIII 14.163b9-12, he says, concerning the ability to examine the consequences of positions, that it is a 'tool' for philosophy. Now, in I 2.101a34-36, Aristotle said that dialectic makes one able to argue on both sides of a question.

⁷ See Alexander, *In Top.* 74.3-6; 11-12; 26-75.1. Alexander reasons from what Aristotle says in his division of dialectical problem to the fact that logic is a tool: ἡ γὰρ λογικὴ πραγματεία ὄργανου χώραν ἔχει ἐν φιλοσοφίᾳ (...) σαφῶς δὲ καὶ ἐνταῦθα τὴν λογικὴν πραγματείαν ὄργανον εἶναι λέγει. And when he examines Chapter 14, he proceeds to the division of propositions, which Aristotle afterwards applies to problems, by defining each of the subject matters through the goals enumerated in Chapter 11 (*In Top.* 94.2-10).

[ἡ λογική] οὔσα (...) ἔργον αὐτῆς [φιλοσοφίας] τοῖς μὲν καὶ μέρος φιλοσοφίας εἶναι δοκεῖ, οἱ δὲ οὐ μέρος ἀλλ' ὄργανον αὐτῆς φασιν εἶναι (*In Top.* 1.7-9)⁸

The first view is generally associated with the Stoics and with certain Platonists. The 'others' include Aristotle, according to Alexander, and himself. Furthermore, in the division of Stagirite's writings that was considered authoritative at that time, the logical works are grouped under the heading ὀργανικά.⁹

In the light of these considerations, the reason for Aristotle's limited use of *organon* is not immediately evident, but perhaps it was applied to the four tools of the *Topics* by antonomasia. Thus, just as a later tradition called all of logic the Tool by antonomasia, so Aristotle reserved this honor for one particular part of that auxiliary science. This limited use of the word would be indicative of their special role and great utility in logic.

The title having been explained, it is time to turn to some aspects of the contents. Now, although it has been and always will be difficult to understand the relations between Aristotle's teachings in his logical treatises and the use he makes of them in his philosophical works, this has never been as problematic as in the modern critics:

This, then, is the Problem: on the one hand a highly formalised theory of scientific methodology; on the other, a practice quite innocent of formalisation and exhibiting rich and variegated methodological pretensions of its own: how are the two to be reconciled? (Barnes 1969, 124-125)¹⁰

⁸ For some account of the nature and importance of the debate on the question whether logic is or is not a principal part of philosophy, see Barnes *et al* 1991. An interesting detail: they refer to the text of *Topics* VIII that we already mentioned in order to comment on Alexander's use here of the expression 'tool' to designate logic: 'No Aristotelian text expressly says that logic is an instrument of philosophy; but *Top.* 163b9-11, which uses the word *Organon* in a pertinent context, may have been in Alexander's mind' (41n5). We could add to the example given Ammonius, *In An. pr.* 8.15-11.21; Philoponus, *In An. pr.* 6.19-9.20; Olympiodorus, *In Cat.* 14.18-18.12.

⁹ See Ammonius, *In Cat.* 4.28-5.4; Simplicius, *In Cat.* 4.21-5.2; Philoponus, *In Cat.* 4.23-35; Elias, *In Cat.* 115.14-17.

¹⁰ Noting that Barnes is one of those who has clearly set out this problem and proposed an original solution to it, Kullmann 1974, 1 raises the question in the same terms. The problematic is still a current one: Devereux and Pellegrin 1990, 2 speak of an 'absence de connexions évidentes entre les textes logico-métaphysiques et les textes scientifiques' to explain 'l'un des problèmes les plus aigus que nous pose le corpus aristotélicien', namely, 'celui des relations entre l'épistémologie et la métaphysique aristotéliciennes, d'un côté, et la science 'en acte' telle qu'on la trouve dans certains des traités qui nous ont été conservés sous le nom d'Aristote de l'autre'.

This criticism has gone as far, in fact, as to put into doubt the existence of any coherence between Aristotle's practice and the rules he furnishes in the *Posterior Analytics* and the *Topics*.

Thus, certain authors see few ties between the first treatise and works whose goal is theoretical, where the matter is necessary and where, therefore, one would expect Aristotle to demonstrate as described in the *Posterior Analytics*, such that he seems to be doing something quite different and going against the method that he himself proposed:

The method which Aristotle follows in his scientific and philosophical treatises and the method which he prescribes for scientific and philosophical activity in the *Posterior Analytics* seem not to coincide. (Barnes 1969, 123)

Such comments motivated Bolton to write in 1987 that:

There has (...) developed in recent years the widespread view according to which there is a more basic unresolvable discrepancy between the account of the path to scientific knowledge mandated by the *Posterior Analytics* and the path actually followed in all the scientific writings including the biological. (Bolton 1987, 120-121)

There are even some who would deny that in the Stagirite's work the totality of the conditions laid down for strict demonstration are ever respected: 'in the whole of the Aristotelian corpus there is not, as far as I am aware, a single example of a demonstration' (Barnes 1969, 124).¹¹ Others will simply conclude that Aristotle failed to carry out his project for scientific knowledge. Pierre Aubenque 1962, for example, observes that 'rien ne ressemble aussi peu à une science, telle qu'Aristote l'entend' as the *Metaphysics* he left us: 'Ni attribution ni déduction: aucune démarche du discours scientifique, tel qu'Aristote le décrit dans la première partie de son *Organon*, ne trouve d'application dans le cas de l'être' (250; 249).

¹¹ Barnes is in fact struggling with a serious problem, for not only does he claim he has found no demonstration in the scientific treatises and feels obliged to invent one himself for the benefit of the reader, but he also affirms that he can see no example of demonstration in the *Posterior Analytics*: 'The *Posterior Analytics* quotes arguments which come close to demonstrative form; but there is no perfect example. In the other treatises there is scarcely a syllogism. There are arguments which might be said to show a degenerate syllogistic form; and there are arguments which can be brought into perfect syllogistic form without much violence to the text; but even these cases are rare, as will be clear to anyone who tries to formalise any of Aristotle's arguments. If the *Organon* were lost we should have no reason to suppose that Aristotle had discovered and was mightily proud of the syllogism' (1969, 124).

Even those who might have managed to sufficiently master the notions of demonstration by cause and by effect, and that of definition,¹² would still have difficulty in analyzing the demonstrations in the treatises, since they require a familiarity with the nature of the subject-matters studied and the greater or lesser degree of necessity that they lend themselves to. Moreover, to this difficulty must be added the fact that one finds alongside these demonstrations arguments that certainly contravene the rules of the *Posterior Analytics* or involve very little certitude, and this is so even in metaphysics, where we are nonetheless considering things that can exist without matter and motion. This is certainly an object of astonishment, since the things studied would hardly seem to justify recourse to such poor arguments. Certainly here, at least, Aristotle should be mostly demonstrating.

Now, in the natural treatises as well, and in all of his philosophy in a general way, there are abundant arguments in which Aristotle sins against his own precepts of demonstration: either by the form, as when he sometimes gives only inductions rather than syllogisms—and even incomplete ones at that;¹³ or by the matter, and in respect to all the qualities of the principles he has so carefully laid out,¹⁴ as when he sometimes takes premises that are neither true nor immediate, or which are too common in relation to the subject of his conclusion. And very often, he takes premises that are not necessary or that are not taken as such.

Indeed, he makes use of opinions that are only true in the majority of cases or that are in keeping with common opinion and often reflected by popular language use. He also uses opinions in keeping with the sayings of the wise or the precepts of the various arts and techniques.¹⁵ In addition, it is not rare to see a position established by many middle terms.¹⁶

¹² The difficulty that is usually acknowledged to reside in the understanding of the logical treatises themselves certainly does not facilitate that of the concordance between theory and practice. See Gotthelf and Lennox 1987, 68; Ackrill 1981, 359.

¹³ Now, the syllogism consists in the form of the demonstration (*An. post.* I 2.71b17-18), whereas the induction is explicitly recognized by Aristotle as one of the two species of dialectical reasoning (*An. post.* I 1.71a5-6; *Top.* I 12.105a10-12).

¹⁴ Aristotle first describes the principles of demonstration by the fact that they must be true, immediate and first, this last criterion implying, he says, that they should be proper to the subject demonstrated (*An. post.* I 2.71b19-23; 72a5-7). He explains later that the principles must be necessary, *per se*, not extrinsic to the subject genus of the demonstration and not common (I 6-9).

¹⁵ Now, he himself established that opinion, δόξα, contrary to the *habitus* of science and of intelligence, which bear on the necessary, has for its object the contingent: ὥστε λείπεται δόξαν εἶναι περὶ τὸ ἀληθὲς μὲν ἢ ψεῦδος, ἐνδεχόμενον δὲ καὶ ἄλλως ἔχειν. τοῦτο δ' ἐστὶν ὑπόληψις τῆς ἀμέσου προτάσεως καὶ μὴ ἀναγκαίας (*Anal. post.* I 33.89a3-4). But we must see that it is the seizing that is not necessary; the opined proposition, *in se*, could be. See Aquinas, *In Post Anal.* I 44#399. An argument that proceeds from opinions, even from

One even sees the Philosopher reasoning in contrary directions,¹⁷ a practice that he recommends for establishing the problem before proceeding to a more apodictic determination of the truth.¹⁸ Often he starts out, in fact, by gathering together the opinions of his predecessors,¹⁹ confident that every philosopher 'finds something to say on nature'. He comments on the reasons they had to hold such opinions,²⁰ discerns the differences between the opinions, and evaluates their similarities.²¹ It is often enough these common elements that constitute the propositions Aristotle will retain, since he judges that they take account of the reality he is studying; but he also explains the reason for the errors committed, and he corrects the inadequate criticisms that have been made of them.²²

Nevertheless, these arguments that are not in keeping with the criteria of the *Posterior Analytics*, as well as Aristotle's own remarks within them to the effect that he considers them to be a distinct step in his philosophical investigations,²³ show sufficient likeness to be considered the signs of a distinct method.²⁴ Furthermore, it is easy enough to imagine that it might be necessary when there is no certain knowledge of the definition of those things whose natures are not directly accessible and evident to us, to develop and use argumentative techniques that do not have all the rigor of demonstrations, and which are in fact quite different

opinions that are received and probable, from $\acute{\epsilon}\nu\delta\omicron\xi\alpha$, cannot, therefore, be demonstrative, since it does not proceed from what is necessary.

¹⁶ Is it necessary to note that Aristotle, when doing this, multiplies different kinds of middle terms to support one conclusion, something that is forbidden by the rules of the *Posterior Analytics*? See I 2.78a14 *seq.* and Aquinas, *In Post Anal.* I 22#191.

¹⁷ Now, he himself established that the demonstrative proposition is made up of one of the two parts of an enunciation, namely, either by the affirmation or by the negation of the attribute, and this is how it differs from the dialectical problem, since this proposition is determined to one of these parts, such that the demonstrator does not dispose of a way to both of the contradictories, as does the dialectician, but that he must only proceed to the true. See *An. post.* I 2.72a8-11; 11.77a33-34.

¹⁸ For example, *Metaph.* III 1.995a24-b4; *Cael.* I 10.279b5-12; *De an.* I 2.403b20-24.

¹⁹ For example, *De an.* I 2; *Ph.* I 2.184b15-22.

²⁰ For example, *Ph.* I 4.187a26-30; 5.188b26-30.

²¹ For example, *Ph.* I 5.188b30-189a9.

²² For example, *Ph.* I 5.188a19 *seq.*; 189a9-10; 4.187b7-88a18; 8; 9; 3.187a1-11.

²³ For example, *Ph.* I 7.189b30-32; IV 4.211a7-11; *De an.* II 1.412a3-6; *Metaph.* II 1.993a30-b20.

²⁴ This is my opinion: for example, Brunschwig 1991, 238-239 does not seem to share it: 'il n'est pas évident, ni hors de toute contestation, que les procédures qui, dans les traités scientifiques et philosophiques d'Aristote, peuvent être qualifiées de 'dialectiques' relèvent toutes d'une seule et même 'méthode dialectique'.

from it. True and certain knowledge is only possible in certain very limited subject-matters: 'one should not seek mathematical rigor everywhere'. If we hold back from presupposing that there is some incoherence on Aristotle's part, we can propose the hypothesis that one part of the non-demonstrative ways of proceeding in the theoretical philosophical treatises is guided by the rules of another method expounded in another treatise.

If we admit this, then it is towards dialectic and towards the *Topics*, 'Aristotle's official treatise on dialectic' (Bolton 1990, 189), that we would naturally turn to explain these other ways of arguing. For Aristotle is certainly not just arguing from any kind of propositions, but from what is *in opinion*. Now, the goal of the *Topics* is to 'discover a method thanks to which we will be able to syllogize from *endoxa* about every problem proposed'. Further, one chapter treating of the genera of problems mentions certain of them whose only end is the acquisition of knowledge. Aristotle even calls them the 'physical problems' (I 14.105b19-25). Finally, not only does he affirm there that one of the uses of the method consists in the possibility of bringing forth 'arguments on both sides' in order to better discover truth and error, but Aristotle lets it to be understood that this preparation for discerning the true and the false touches even upon the starting points of our reasoning, and that this method is the only one that can treat of the principles of the philosophical sciences, which, because they are first, cannot be demonstrated (I 2.101a34-b4). Dialectic would then be a way for the sciences to go towards their respective principles. Would this be what the natural philosopher is using in the *Physics* to inquire about the principles of mobile beings? Or the 'psychologist' in the *De Anima* to establish what definition will take account of the essence of the soul?²⁵

Thus, when once we are familiar with the introductory remarks of the *Topics*, it seems reasonable to suppose that certain kinds of non-demonstrative arguments arise from dialectical operations, that the methodological remarks that accompany them pertain to the science of dialectic, and that given their frequency, these ways of proceeding are an integral part of

²⁵ It is unlikely—I would even accuse these interpreters of proposing *theses*, according to the Aristotelian terminology—that the doxographical reviews in the first books of these two treatises only serve to clear the table of previous ideas, and that the discussion of the opinions concerning the soul brought nothing to Aristotle when he undertook Book II, as many interpreters affirm (see De Corte 1939, 462-463); or, again, that the study carried out in Book I is optional for any understanding of the treatise and even of little interest (see Durrant 1993, viii). Aquinas takes quite a different tack. See *In de Anima* I 2#30. And it is well known that many contemporary writers on the subject are less categorical in their criticism, seeing in Book I the opportunity for Aristotle to lay out his problem before examining it and profiting from clues that will determine his own investigation. For instance, see Witt 1992, 169. See also Mansion S. 1961, 48. Thus, one could well imagine that in the *Physics* and the *De Anima* what Aristotle does is with a view to determining what is of value in his predecessors, drawing 'profit from what they said well, and avoiding what was not so', as he himself said (*De An.* I 1.403b23-24).

Aristotle's philosophical method. Thomas Aquinas notes just such a connection between certain passages from the scientific works and dialectic and, furthermore, with the treatise in which this method is expounded.²⁶ Aubenque 1962, 282 puts into evidence the use of this method in biology and the other sciences; he even goes so far as to propose that, 'les textes métaphysiques d'Aristote s'ordonnent selon une structure de *fait*, très différente de celle selon laquelle Aristote lui-même aurait voulu constituer la philosophie comme science. Cette structure de fait est argumentative et aporétique ou, dans la terminologie d'Aristote, *dialectique*'.²⁷ Others also call upon dialectic in order to comment on diverse passages whose tone is not exactly apodictic, but they rarely call upon the *Topics* and upon the detailed considerations contained therein.²⁸

As a matter of fact, these considerations are rather problematic and difficult to understand, as witness the Ancient commentators such as Alexander of Aphrodisias and Albert the Great, or even more recent ones such as Pacius, Maurus or Waitz, who hardly explain probable reasoning, nor the essential principles of the method. They are most often content to paraphrase the text and to furnish detailed explanation useful for the study of places and particular tools. Since the middle of the nineteen-hundreds, starting with Thionville, there is more of an effort to define the key concepts of the treatise, whose analysis has gained favor, but whose total value is still far from being unanimously recognized.²⁹

²⁶ In *In Phys.* I 2#16, in *In de Coelo* I 20#199 and 22#222, Aquinas explains the way Aristotle treats the opinions and in doing so, sends his readers each time to the *Topics*.

²⁷ See also 1970, 20 *seq.*; 1964, 2.

²⁸ 'Most scholars agree nowadays that Aristotle's method in his writings is to a large extent dialectical and much research has been published on this. On the whole, this research (...) has shown how Aristotle uses various dialectical devices, such as division, analogy, reputable opinions and others in the context of other writings. However, it is striking that no adequate research has been done on the use of the central notion of dialectic—the *topos*—in other writings; perhaps this is due to the fact that scarcely any scholar was absolutely sure as to what a *topos* was' (Slomkowski 1997, 7). Certain elements of the *Topics* are, however, an exception to this. Let us mention, as does Slomkowski, what the criteria are to which Aristotle often explicitly refers in his treatises that allow us to judge endoxality, as well as certain sources of probable premises, such as the arts and what is observed to happen for the most part. Furthermore, Aristotle's application of his doctrine in Chapter 15 to the other treatises is more evident and more frequently pointed out by commentators, although they don't really have recourse to this in detail to explain the passages where they note that Aristotle uses them. For examples, see Owens 1963, 108-109; Smith 1995, 53, as well as 1997, 88.

²⁹ This judgment on the works of the ancient commentators in regard to the whole treatise of the *Topics*, as well as the classification into two trends in the opinions of the modern exegetes on dialectic that I will now be presenting briefly, is largely inspired by passages in Pelletier's Introduction to *La dialectique aristotélicienne* (1990), which is devoted to these questions.

One of the most wide-spread opinions is based on an agreement about the chronological anteriority of the *Topics* among Maier, Solmsen, Jaeger, Stocks, Ross, Kapp, and Bochenski, *inter al*, who solve the problem of understanding by the supposed evolution of Aristotle's thought. According to them, the *Topics* is an early work, written when Aristotle was still in ignorance about the syllogism, invalidated by the *Analytics*³⁰ in which is to be found the form that science must take: 'It is his own *Analytics* that have made his *Topics* out of date' (Ross 1923, 59).

Nonetheless, in the last few decades, De Pater, Brunschwig, Weil, Evans, Lugarini, Berti, among others, have come to a better recognition of the particular value that the *Topics* had in Aristotle's eyes, and they approach it in a less historical way.³¹ This, then, is the situation: one finds in the majority of the major treatises an examination of the previous opinions on the subject treated; moreover, for most of these interpreters the scientific works, including those on being as being, will not answer to the epistemological requirements of the *Posterior Analytics*. Consequently, we must recognize that they are 'marked' by dialectic.³² Suddenly, Aristotelian circles became alive with enthusiasm for dialectic: it was even proposed as the method of ontology by certain Aristotelians who found a confirmation of their interpretation in the aporia which abound in the *Metaphysics*, as well as in the words of its author (I 1.101a36-b4), who seems to them to have the first principles depend on dialectical proofs. Berti 1970, 59 attributes this view particularly to Lugarini and Aubenque. He claims that for the former, 'Aristotelian philosophy (...) involves a non-apodictic, but diaporetic framework, that is, it consists in the discussion of aporia or problems: the method of such a way of proceeding is precisely dialectic'.³³

³⁰ See Solmsen cited by Weil 1951, 286.

³¹ 'Il semble légitime de commencer par prendre l'ouvrage tel qu'il se donne, et de ne demander d'abord qu'à lui de nous instruire de son objet et de sa signification' (Brunschwig 1967, xviii); 'I am not directly concerned with questions of the relative chronology of Aristotle's works. I believe that before these questions can be embarked upon, it is necessary to obtain an accurate assessment of the absolute character of Aristotle's doctrines, and that in the case of dialectic this has not yet been done' (Evans 1977, 4).

³² 'Il se pourrait (...) que l'interprétation de la philosophie d'Aristote ait avantage à s'appuyer sur l'étude des *Topiques* (...) à voir combien les démarches effectives d'Aristote s'éloignaient de la description qu'il avait lui-même donnée des exigences et des méthodes de la science démonstrative, on a pu se demander s'il était opportun de prendre pour argent comptant les déclarations de principe par lesquelles il semblait définir restrictivement les pouvoirs de la dialectique. Beaucoup d'excellents interprètes de son oeuvre ont été ainsi conduits à reprendre l'examen des *Topiques*, avec l'espoir d'y trouver quelque chose comme la théorie de sa pratique réelle' Brunschwig 1967, xvi-xvii. 'The general outcome, then (...) is a view of the nature and function of dialectic which places it firmly in the center of the mature Aristotle's thought' (Evans 1977, 4).

³³ W. Murray translation

One very reassuring thing, Bolton, although he chooses Ross and Barnes as examples of these respective currents, identifies, as does Pelletier, these two trends as the principal ones among the moderns. He affirms that:

Recent writers have taken a view of dialectic quite opposed to the one summarized by Ross. Finding little or no indication that the method for finding and laying out demonstrations described in the *Analytiks* is actually guiding Aristotle's thought in his philosophical and scientific works, scholars have turned to his descriptions of the method of dialectic, in the *Topics* and elsewhere, to find the key to understanding his procedures (...) Generally speaking, then, the two sharply opposed views represent the dominant tendencies in recent scholarship. (Bolton 1990. 186-187)

But paradoxically, the new favor accorded to dialectic has not rubbed off on the *Topics*. The interpreters are annoyed that the pillars of the method, the tools and the places, are defined in terms that go hardly beyond their utility. Aristotle, when he does seem to have some inclination to define them, never mentions more than their very common end of assuring abundance. Words are used in senses that are only tied together by some analogy. Contradictions are multiplied between this treatise and the rest of the *Organon*. The verdict: a 'mode de composition purement additif [qui] ne donne pas plus le sentiment d'une oeuvre qu'un tas de briques celui d'une maison' (Brunschwig 1967, viii).³⁴ Certain authors recognize from this point on, as Le Blond did, that one should not attempt to assimilate theory and practice in Aristotle in order to avoid prejudice to their coherence and agreement.³⁵ Aristotle not having uniformly applied his theory of the *Posterior Analytics* in his scientific treatises, a rehabilitation of dialectic has been made necessary, but this does not imply that the general opinion about the *Topics* has been modified:

La méthode dialectique (...) joue (...) un rôle plus important dans la pratique aristotélicienne de la recherche scientifique ou philosophique que celui auquel paraissait la destiner son statut théorique. (Brunschwig 1967, xvii)³⁶

In point of fact, for most contemporary Aristotelians, the tie between the theory of the *Topics* and the real way of proceeding used by Aristotle, even though it might have been dialectic, is as

³⁴ See also: 'une mosaïque d'éléments juxtaposés, indépendants les uns des autres' (Brunschwig 1967, viii); 'un catalogue, où, sous très peu de titres généraux, des centaines de remarques se suivent l'une l'autre sans ordre précis' (De Pater 1965, 1); 'Les *Topiques* présentent au lecteur une masse confuse' (Le Blond 1939, 21).

³⁵ 'Il y aurait un inconvénient sérieux à rapprocher trop étroitement théorie et pratique, chez Aristote, et à tenter perpétuellement d'expliquer l'une par l'autre: ce serait en effet préjuger de la cohérence parfaite, poser en principe l'accord de celle-ci avec celle-là' (Le Blond 1939, 8).

³⁶ See also: 'Il suffit de la comparer [la topique] (...) avec la syllogistique aristotélicienne classique pour comprendre le destin sans éclat qui l'attendait' (Brunschwig 1967, xiv).

fragile, if not more so, than that which connects his practice to the rules of the *Posterior Analytics*.³⁷

Since the publication of Paul Moraux's article, there is a definite tendency to speak of the *Topics* as a sort of game. The interpreter considers that certain elements—those related to the dialogical and opinative aspects of the method—prove that Aristotle is not constructing the latter in the abstract, but that he is founding it on the practice he has witnessed, and whose goals and means he is attempting to clarify. Moraux thus draws the conclusion that there were sophisticated dialectical tournaments inscribed in the national mores of the time.³⁸ Although he admits to some possible relationship between them, he warns that one simply cannot identify Aristotle's systematic way of proceeding in science with what we find in the *Topics*. The latter determine a kind of intellectual gymnastics that must not be confused with Platonic dialectic, which still had truth as a goal.³⁹ Moreover, Moraux 1968, 309 argues, oral discussions are not necessary to the acquiring of knowledge. Thus, certain authors see in the supposed affected mode of disputation the artificial context which determined the original writing of the *Topics*. This is what would have required putting together a guide to conduct these debates.⁴⁰ Certain authors thus insist that the treatise was addressed to an historically and socially well determined group of readers;⁴¹ and that finally it has neither philosophical interest nor pertinence.⁴²

According to another perspective, there have been some recent attempts to identify, 'quelles exigences (...) de la connaissance humaine ont porté [Aristotle] à prêter tant

³⁷ 'Writers have standardly supposed that Aristotle simply does not say anything further about this [the necessary role of dialectic in scientific inquiry mentioned in I.2 101a36ff] in the *Topics*. Some have even suggested that this is an indication that the method of the *Topics* itself is not one which Aristotle in fact conceives of as appropriate for use for the scientific purposes mentioned' (Bolton 1990, 213). For example, the 'strong dialectic' that Irwin says is that of the *De Anima* does not pertain to the *Topics*, which figures among the immature works; this dialectic would be the method that Aristotle developed in the *Metaphysics*.

³⁸ See Moraux 1968, 277; 291-292.

³⁹ See Moraux 1968, 300; 311.

⁴⁰ 'the immediate subject of his [Aristotle's] inquiry is (...) a highly artificial and (...) unnatural one' (Kapp 1942, 63).

⁴¹ 'De même que, pour lire un traité de jeu d'échecs, il faut connaître les règles élémentaires de ce jeu, vivre dans un milieu où l'on ait l'occasion d'y jouer, et nourrir le désir de s'y perfectionner, de même, semble-t-il, les *Topiques* s'adressent à une catégorie de lecteurs historiquement et socialement bien définie' (Brunschwig 1967, ix).

⁴² See Dorion 1993, 500.

d'importance à *l'action* de discuter et à *l'habileté* dont elle procède qu'il ait jugé nécessaire d'élaborer à ces fins une *méthode* appropriée' (Pelletier 1991, 14). Considering that aside from a wide-spread interpretation of the *Topics*, nothing leads us to believe that at Aristotle's time people indulged in a dialectical activity that was more artificial than that in Plato's dialogues,⁴³ Pelletier sees in Aristotle's references to certain realities and facts the sign that he was seeking 'à décrire ce que tend à faire la raison qui confronte à l'ensemble de ses opinions établies une position prise sur un problème soulevé' (Pelletier 1991, 23n63). According to him, 'c'est la vie que règlent les *Topiques*, et non des jeux ou des tournois purement artificiels' (Pelletier 1991, 27), and he makes his own an affirmation of Ross 1939, 251, which he applies to the situation of the *Topics*: 'Aristotle in discovering the syllogism was only discovering how men always actually had reasoned, and he never claimed to be doing more than this'.

About the same time as Pelletier, Bolton 1990 put himself in opposition to the 'tournament concept', which he claims was that of G. Grote, H. Cherniss and Brunschwig, and he also recognizes the natural character of dialectic.⁴⁴ But the image of the tournament is agreeable and tenacious. The view that dialectic just might be the natural way of proceeding of the human mind remains a minority one, and it is still doubted that Aristotle might really have used it in his treatises. In witness to this we find, among others, this discouraging remark with which one of the most recent studies opens:

Aristotle's *Topics* is a handbook on how to win a debate organised in a certain way. (Słomkowski 1997, 8)

A reaction of many scholars—Irwin is the best example—has been to try to seek out Aristotle's true dialectic elsewhere, precisely in treatises such as the *De Anima* and the *Metaphysics*.

It does not seem plausible to me that Aristotle would have fixed as his goal in writing the *Topics* to pass on to posterity a minute code of rules that governed a game played by his contemporaries, and that at the same time he would have neglected to describe the logical principles that order reflections in which all agree they see distinct steps of his concrete philosophical method. For if, as we can clearly see, certain parts of his scientific work are not demonstrative, we must either believe that it is the theory of his *Topics* that Aristotle is using

⁴³ 'If it [the *Topics*] had been lost we should have no solid reason for believing in the occurrence of anything other than what is depicted in Plato's dialogues, and that is something different' (Robinson 1931, 438).

⁴⁴ See 187-189.

there,⁴⁵ or that he did not submit the ways of proceeding he is using there to any systematic study having come down to us, or, again, these passages—they are really quite numerous—are of no particular significance. I think rather that the teachings of the *Topics* only treat of face to face discussions between antagonists as a preliminary step for a method that is principally aimed at making someone able to reason in the best way possible, starting with a partial knowledge of things, and which quite naturally is ordered to Aristotle's properly philosophical activity.

To show that this is the case would amount to establishing that there is necessarily dialectic in the philosophical treatises and that this dialectic is none other than that of the *Topics*, which, consequently, could not have been written with a view to tournaments. This undertaking would also have the advantage, by permitting a more distinct understanding of dialectical arguments, of throwing some light on the confusion brought about by their presence in the treatises in the midst of the demonstrations, as well as of rehabilitating the latter. In fact, one could henceforth envisage the possibility that not only do these probable arguments not compromise the scientific character and the seriousness of the treatises, but that they are really necessary as steps towards perfect demonstration, and that the method that governs them is an integral part of a philosophical enterprise that takes in both dialectic and demonstration.

The examination required by the verification of this hypothesis that *topical dialectic* aims at philosophical knowledge in Aristotle implies that one look to see if the Philosopher, in those treatises that have a theoretical goal, does or does not use a part of the ways of proceeding described in the *Topics*. Philoponus, in his commentary on the *Analytics*, indicates two points of view for the study of dialectic: the point of view of its nature, ἐκ φύσεως, and the point of view of its use, ἐκ χρήσεως.⁴⁶

But there is no need to go back to the Greeks, as far as that goes. For the last few years one very fashionable idea is that the way to understand Aristotle's method consists in being able to set up a dialogue between his theoretical prescriptions and his scientific accomplishments, and if not that, at least to study the Stagirite's ways of proceeding in these latter work. At the heart of this preoccupation the biological treatises occupy a privileged place. Now, what those works that are based on this hypothesis, 'tendent à montrer, c'est que ce sont

⁴⁵ Admitting this hypothesis according to which the *Topics* furnishes the details of the method of investigating definitions, a method that Book II of the *Posterior Analytics* describes in general.

⁴⁶ See *In An. pr.* 21; 25.

bien les questions, les concepts et les méthodes de la science aristotélicienne tels qu'ils sont décrits dans les ouvrages épistémologiques, notamment dans les *Seconds analytiques*, que nous retrouvons 'en acte' dans les textes biologiques' (Pellegrin 1995, 21-22).⁴⁷ But many have also suggested that if we want to come to a better understanding of Aristotelian dialectic in the *De Anima* and the *Metaphysics*, we must now proceed by detailed studies of its use therein.⁴⁸

To understand and explain the entire doctrine of the *Topics* would be too ambitious and even sometimes useless in the context of this research, since certain important parts—devoted to dialogue and to the relations between the interlocutors—do not apply in philosophy. I will, therefore, limit my contribution to the verification of the hypothesis to one part of the method, and take a close look at the tools expounded in Book One. They are often confused with the places:

S'il est vrai que les *Topiques* sont un livre presque oublié—ou du moins très peu étudié et surtout peu enseigné—cela vaut avant tout pour son exposé des instruments. On sait encore vaguement qu'Aristote a fait un exposé des lieux. Mais on ne sait plus guère qu'il s'est également occupé des données auxquelles ils s'appliquent; si la théorie des instruments est encore signalée, on voit en elle "une doctrine qui est toujours demeurée fort obscure". La raison historique de l'oubli des instruments semble être en effet que leur sens méthodologique a échappé aux commentateurs des *Topiques*. (De Pater 1965, 151)

And they have been neglected by the commentators because of the little space Aristotle devotes to them. Nonetheless, if the study of Aristotle's practice is so indispensable for an understanding of *topical dialectic*, it must be crucial to that of the tools precisely because Aristotle gave them so little theoretical space. Indeed, this study may well end up revealing that we could say of the tools what Plato, *Phlb.* 16e said of all of dialectic, calling it a 'road', just like Aristotle: it is easy to indicate, but extremely difficult to follow.

Furthermore, if the hypothesis that there is use of the tools and of some elements of dialectic as described in Book One of the *Topics* in the philosophical treatises is confirmed, it would be likely also that it would be the same for the more specific principles expounded in

⁴⁷ Gotthelf 1987, 197 also adopts this point of view according to which theory and practice can and must explain one another.

⁴⁸ 'Despite the attention that modern scholars have recently given to Aristotle's dialectical method, what is lacking in the literature are detailed studies that show exactly how he proceeds when he addresses a typical metaphysical problem' (Cleary 1993 (1995), 175).

the books devoted to the problems of the accident, the genus, the property and the definition; and one would be better equipped to inquire eventually about these principles in view of which the tools are said to be useful, as well as about their application.

In the first part, therefore, I will attempt to explain what the nature and function of the tools are according to Aristotle, doing so in the light of the principal commentators who have studied them. In a second part, I will go on to examine applications in psychology and in the *Metaphysics*.

There were many possible scenarios: Skim over a large number of passages, or more carefully analyze a fewer number of them. I chose the second alternative. It permits a much better appreciation of the importance of the tools with a view to the discovery of the truth and the detection of the false for Aristotle. Furthermore, the fact that he gathers up the opinions of his predecessors, distinguishes the meanings of words, and finds both likenesses and differences, is admitted; this isn't where the difficulty lies. Now, to determine when, how, and to what purpose he is doing so requires a careful consideration of the context in which he is doing it.

The passages to be used to illustrate the employment of the four tools were difficult to choose. Many parts of his work would have lent themselves to this task. It would have been possible to choose some typical passages where, according to all appearances, Aristotle is arguing dialectically. And his examinations of the opinions preceding the establishment of the definitions of place, of vacuum and of time come readily to mind, as well as the celebrated and very elaborate doxographical studies undertaken in the first books of the *Physics* and the *De Anima*. But these are rather isolated cases. Indeed, in the majority of Aristotle's works, one can readily observe certain departures from the apodictic method which do not necessarily go in a clearly dialectical direction. It is very difficult for us to always be certain of the degree of certitude attached to his conclusions. And this is not surprising, since we have this difficulty already with our own reasoning. We pass progressively and unknowingly from dialectic to true knowledge, and it is difficult to recognize whether one knows yet or not.⁴⁹ I therefore chose to examine certain less manifestly dialectical passages, and sometimes even non-dialectical ones.

⁴⁹ See *Rh.* I 2.1358a23-26; *An. post.* I 9.76a26.

I did so because this would furnish opportunities to examine the tools outside of their dialectical context—not all uses of the tools in metaphysics are dialectical, as we will see—and thus help to confirm, develop and explain the hypothesis about their natural character. It will thus become clear, in fact, that they are not acquired conjointly with the dialectical method and, therefore, are not entirely artificial, since they can be used without it.

But is it appropriate to consider the tools not only as they are perfected by dialectic, but also as perfected by the art of the *Prior Analytics* and even as they are natural? After all, someone who would set out to study the dialectical syllogism would not think it a part of his task to explain the syllogism in general as a logical process, or even a psychological one. It seems that this would be a question of prerequisites that should be treated separately. But in the case of the syllogism, Aristotle did devote to its study other texts from those on the dialectical syllogism. Whence, there is no need when studying this latter in logic to study the syllogism of the *Prior Analytics* at the same time. But, it seems that to the tools Aristotle only devoted those chapters in the *Topics* concerning them. He does not return to them anywhere in logic, at least not explicitly. It is true, however that he does say that:

πῶς δ' εὐπορήσομεν αὐτοῖς πρὸς τὸ τιθέμενον ἀεὶ
συλλογισμῶν, καὶ διὰ ποίας ὁδοῦ ληψόμεθα τὰς περὶ
ἕκαστον ἀρχάς, νῦν ἤδη λεκτέον· (An. pr. I 27.43a20-22)⁵⁰

What Aristotle describes by, διὰ ποίας ὁδοῦ ληψόμεθα τὰς περὶ ἕκαστον ἀρχάς leaves us to believe, in fact, in the presence of rules for instrumental investigation in the *Prior Analytics*. But we must see that Aristotle also says a bit further:

καθόλου μὲν οὖν, ὃν δεῖ τρόπον τὰς προτάσεις
ἐκλέγειν, εἴρηται σχεδόν· δι' ἀκριβείας δὲ
διεληλύθαμεν ἐν τῇ πραγματείᾳ τῇ περὶ τὴν
διαλεκτικὴν. (An. pr. I 30.46a28-30)⁵¹

Thus, it seems pertinent to include a certain consideration of the tools in general in the study of the dialectical ones.

⁵⁰ 'Now it is time to explain how we may ourselves always be supplied with syllogisms about what is set up, and the route by which we may obtain the principles concerning any particular subject.' Smith translation modified.

⁵¹ 'The way one ought to select premises has been sufficiently explained in general, then. We have gone through this in detail, however, in our treatise concerning dialectic.' Smith translation modified.

The scientific context will also allow us to know the *dialectical tools* more distinctly in their specificity. For, just as for someone who is examining the dialectical syllogism, the examination of demonstrations would be useful in order to distinguish what is common to every syllogism from what is proper to the dialectical one; in like manner, for us who are going to treat of the dialectical tools, the examination of their use in a scientific context will be useful in order to distinguish what there is that simply pertains to our rational nature or to the art of syllogizing from that for which only the art of dialectic can render us able. And this will be so in distinguishing the meanings of words, and in seeking likenesses and differences for the purpose of obtaining premises. Furthermore, contrary to other disciplines, the use of the tools by metaphysics presupposes the mastery of dialectic and thus illustrates the tools in a way that is helpful for someone wishing to study *dialectical tools*.

But especially I chose passages concerned with questions connected to the very nature of the tools themselves. The first application is from the *De Anima*, especially the first part of Book III, with a few parts of Book II, passages in which we find not only an abundant use of the tools, but where they are employed in coming to an understanding of the natural abilities of sense and reason. Now, the internal senses and reason are precisely the immediate natural sources of the other abilities called the dialectical tools. My second application is from Book Theta of the *Metaphysics* and is a consideration of the notions of ability and act. This choice is very suitable for many reasons, among which the fact that the tools are defined by the first of these notions (they are abilities) and are recognized by the second (we know them by their acts). Thus, not only will I then be considering the use of the tools, but I will be examining notions that are extremely helpful in understanding these same tools.

The choice of the *Metaphysics* and of the *De Anima* has another advantage. Not only are these works amongst the treatises in which, in spite of the admitted use of dialectic by Aristotle, there is no consensus about the role or the type of this dialectic, but there is a clear denial that it is the dialectic of the *Topics*. Indeed, since the end of the eighties, Irwin has been proclaiming that 'procedures resting on a restricted and basic set of endoxa' sufficiently certain can reach principles which are certain, and it is this 'strong dialectic' which he asserts to be that of Aristotle's mature works, among which notably the *De Anima* and the *Metaphysics*, the *Topics* being only an immature work. We will thus be better positioned to examine Irwin's hypothesis, at least in respect to the tools.

I will also be consulting certain important commentators on these texts, particularly those who have also worked on the *Organon*.

PART ONE

The Aristotelian Conception of

The Tools of Dialectic

CHAPTER ONE

THE PLACE OF DIALECTIC IN LOGIC AND OF THE TOOLS IN THE *TOPICS*

We will start by situating the *Topics* in logic and the tools in the *Topics*.

DIVISION OF LOGIC INTO THREE PARTS: APPREHENDING, COMPOSING AND DIVIDING, REASONING

One way to explain the necessity of logic is to start from the statement that the human race lives by art and reason and to apply this to the acts of reason.¹ This is what Aquinas does in his Proemium to the *Posterior Analytics*. And the answer that he gives there to the question of what logic is about is that it is about the act of reason:

Logica (...) est circa ipsum actum rationis, sicut circa propriam materiam.
(*In Post. Anal.* #2)

But in the beginning of his commentary on the *De Interpretatione* he gives a slightly more precise answer, noting that it is about three acts of reason:

Cum autem Logica dicitur rationalis scientia, necesse est quod eius consideratio versetur circa ea quae pertinent ad tres praedictas operationes rationis. (*In Periherm.* #2)

¹ Mephistopheles is right, at least about this; it is indeed a question of preventing reason from wandering wildly and of training it to go straight, as is proper to its nature. And to do so, one must in fact lead it to reflect on what it was doing up to then spontaneously.

And in exemplifying 'ea quae pertinent' to these three acts of reason, he speaks of what he calls elsewhere (in the commentary on the *De Trinitate* of Boethius, q.1 a.5 ad 2, for example) the tools of reason, such as definition, statement, syllogism. Thus logic can be said to be either about three acts of reason, or about the tools necessary for these acts. But it is about three acts of reason more as about its end and about the tools necessary for these three acts more as its subject.

Cum autem logica sit scientia contemplativa, docens qualiter, et per quae devenitur per notum ad ignoti notitiam, oportet necessario quod logica sit de huiusmodi rationis instrumento, per quod acquiritur per notum ignoti scientia in omni eo quod de ignoto notum efficitur. Hoc autem est argumentatio, secundum quod argumentatio est ratiocinatio mentem arguens et convincens per habitudinem noti ad ignotum de ignoti scientia. (Albert the Great, *De Praedicabilibus*, 6b)²

Again, sometimes Thomas combines the two ideas, for example, in the beginning of his commentary on the *Nicomachean Ethics*:

Alius autem est ordo, quem ratio considerando facit in proprio actu, puta cum ordinat conceptus suos adinvicem, et signa conceptuum, quia sunt voces significativae (...) Ordo autem quem ratio considerando facit in proprio actu, pertinet ad rationalem philosophiam, cuius est considerare ordinem partium orationis adinvicem, et ordinem principiorum adinvicem et ad conclusiones. (*In Eth.* #1-2)

Logic will be divided as its subject is divided. Now, the diversity of logical tools, as with all tools, will depend on the diversity of the ends to which they are subordinate. According as we emphasize either two or three acts of reason, therefore, we will be insisting on two or three tools, and will be dividing logic into two or three. Albert stresses the acts of reason by which it goes from the known to the unknown, and thus he often only mentions the tools that are ordered to this, namely, definition and reasoning:

Divisio autem logicae, et quae sunt partes ipsius (...) accipienda sunt ex intentione ipsius. Sicut vero jam ante dictum est, logica intendit docere principia per quae per id quod notum est, devenire potest in cognitionem ignoti. Est autem incomplexum, de quo quaeritur quid sit: aut complexum, de quo quaeritur an verum vel falsum sit. Sciri autem non potest incomplexum de quo quaeritur quid sit, nisi per diffinitionem. Complexum autem, de quo quaeritur an verum vel falsum sit, non potest sciri nisi per argumentationem. Ista ergo sunt duae partes logicae. Una quidem ut doceantur principia per quae sciatur diffinitio rei et quidditas (...) Alia vero

² See also Albert, *In An. post.* 22b, where he affirms that the subject of the *Posterior Analytics* is demonstration and not the act of demonstrating.

ut doceantur principia qualiter per argumentationem probetur enuntiationis veritas vel falsitas. (*De Praedicabilibus*, 8b)³

The statement, indeed, is not a way of going from the known to the unknown as are defining and reasoning. It expresses rather what is already known.

Aquinas, on the other hand, generally shows the necessity of logic from reason's need to be perfected in its three acts:

duplex est operatio intellectus: una quidem, quae dicitur indivisibilium intelligentia, per quam scilicet intellectus apprehendit essentiam uniuscuiusque rei in seipsa; alia est operatio intellectus scilicet componentis et dividensis. Additur autem et tertia operatio, scilicet ratiocinandi, secundum quod ratio procedit a notis ad inquisitionem ignotorum. (*In Periherm.* #1)

Whence, he divides logic into three:

Oportet igitur Logicae partes accipere secundum diversitatem actuum rationis. Sunt autem rationis tres actus: quorum primi duo sunt rationis, secundum quod est intellectus quidam. Una enim actio intellectus est intelligentia indivisibilium sive incomplexorum, secundum quam concipit quid est res. Et haec operatio a quibusdam dicitur informatio intellectus sive imaginatio per intellectum. Et ad hanc operationem rationis ordinatur doctrina, quam tradit Aristoteles in libro Praedicamentorum. Secunda vero operatio intellectus est compositio vel divisio intellectus, in qua est iam verum vel falsum. Et huic rationis actui deservit doctrina, quam tradit Aristoteles in libro Peri Hermeneias. Tertius vero actus rationis est secundum id quod est proprium rationis, scilicet discurrere ab uno in aliud, ut per id quod est notum deveniat in cognitionem ignoti. Et huic actui deserviunt reliqui libri logicae. (Aquinas, *In Post. Anal.* #4)⁴

These two currents have run side by side in the history of Aristotelian logic. Boethius divides it into two at the beginning of his commentary on the *Isagoge*; a division into three is what the majority of the Greek commentators propose. For example, in his division of Aristotelian writings in the *Prolegomena* to the *Categories*, Ammonius, after having divided the acroamatic works into the theoretical, practical and instrumental, explains that the theoretical ones are those that aim at the distinction of the true and the false, and the practical ones are those that aim at distinguishing the good and the bad. And as there are certain notions that appear to be true but are not, and which manage to insinuate their way into these areas of

³ See also, for example, *De Praedicabilibus*, 14b-15a, where Albert says that what the logician is dealing with is divided and multiplied according to what concerns the discovery of the definition and of the syllogism.

⁴ See also *In Periherm.* #2.

knowledge, and things that put on the cloak of the good without being so, we need a tool—demonstration—in order to exercise a critical discernment in respect to them. And after having divided the practical and theoretical works, he divides the instrumental works, saying:

τῶν ὀργανικῶν τὰ μὲν εἰς τὰ περὶ τῶν ἀρχῶν τῆς μεθόδου τὰ δὲ εἰς τὰ περὶ αὐτῆς τῆς μεθόδου τὰ δὲ εἰς τὰ περὶ τῶν ἄλλως εἰς τὴν μέθοδον συντελούντων, τὴν ἀποδεικτικὴν λέγω· ἐπειδὴ γὰρ ἡ ἀπόδειξις συλλογισμὸς ἐστὶν ἐπιστημονικὸς, δεῖ πρὸ τούτου εἰδέναι τὸν καθόλου συλλογισμὸν. ἀλλ' ἐπεὶ τοῦτο τὸ τοῦ συλλογισμοῦ ὄνομα οὐχ ἀπλοῦν τι δηλοῖ ἀλλὰ σύνθετον (συλλογὴν γὰρ τινα λόγων σημαίνει), οὐκοῦν πρὸ ἐκείνου δεῖ μαθεῖν τὰ ἀπλᾶ ἐξ ὧν συντίθεται, ταῦτα δὲ εἰσὶν αἱ προτάσεις. ἀλλὰ καὶ αὗται σύγκεινται ἐξ ὀνομάτων καὶ ῥημάτων, ἃ διδάξουσιν αἱ κατηγορίαι, τὰς δὲ προτάσεις τὸ Περὶ ἑρμηνείας, τὸν δὲ καθόλου συλλογισμὸν τὰ Πρότερα ἀναλυτικὰ. ταῦτα τοίνυν εἰσὶν αἱ ἀρχαὶ τῆς μεθόδου· τὰ δὲ δεύτερα ἀναλυτικὰ αὐτὴν ἡμᾶς διδάξει τὴν μέθοδον, τοῦτ' ἐστὶ τὸν ἀποδεικτικὸν συλλογισμὸν. (Ammonius, *In Cat.* 5)⁵

Although the two divisions shed an interesting light on logic, and the division into two is more proportionate and manifests better the usefulness of logic, the division into three, which devotes an entire part to the enunciation, subject of the *De Interpretatione*, better describes the Aristotelian treatises as they have come down to us.

DIVISION OF THE THIRD PART OF LOGIC

Four of Aristotle's logical treatises are about the syllogism, and there seem to be two main divisions of it within the Aristotelian tradition. One is the division into formal and material *logic of the third act*, or into the genus syllogism and its species. Thomas' words in the beginning of his commentary on the *De Interpretatione* seem to touch upon this division, which is given more fully by Albert in the beginning of his commentary on the *Prior Analytics*:

⁵ Nonetheless, it is incorrect to attribute the study of the noun and the verb to the *Categories*. In fact, they name concepts according to the role these play in the enunciation. Now, there is no question of composition in the *Categories*, and even if certain predicaments are expressed by verbs, others by nouns, noun and verb are not formal objects of this treatise.

De his vero quae pertinent ad tertiam operationem determinat in libro *Priorum* et in consequentibus, in quibus agitur de syllogismo simpliciter et de diversis syllogismorum et argumentationum speciebus, quibus ratio de uno procedit ad aliud. (Aquinas, *In Periherm.* #2)

Tracturi de scientia syllogistica, oportet primum scire quod primo tractandum est de syllogismo simpliciter, qui super rationem et inferentiam syllogismi nihil addit. Primo determinandum et postea de speciebus syllogismi quae secundum materiam determinantur agendum est qui sunt syllogismus demonstrativus in materia necessaria, et syllogismus dialecticus in materia probabili; et tandem de syllogismo sophistico et tentativo dicemus, qui imitantur secundum apparentiam syllogismum dialecticum: et in his perficietur scientia syllogistica. In libro ergo qui dicitur *Priorum Analyticorum* agemus de syllogismo simpliciter non contracto ad aliquam materiam. (Albert, *In An. pr.* 459a)

This division of the *Prior Analytics* against the other three treatises has found an important place in the scholastic text-books in logic.

The other division is into the science of judging and the science of finding or investigating (to which can be added the science of deceiving or failing). This division is given by Albert (from Boethius):

Summe autem necessaria et utilis est logica philosophiae. Ex quo enim logica docet qualiter ignotum fiat notum, patet quod in nulla philosophia aliquid notum fieri potest nisi per logicae doctrinae facultatem. Est enim ut dicit Boethius in *Topicis* ratio disserendi, hoc est, docens qualiter de quolibet disserendum est, quae in duas, ut dicit, distribuitur partes, scilicet scientiam inveniendi quam topicam Graeci vocaverunt: et scientiam iudicandi quam Graeci analyticam, Latini autem resolutariam nuncupaverunt. (*De Praedicabilibus*, 5a)

It is also given and completed by Thomas in his Proemium to the *Posterior Analytics*. Comparing the acts of reason to the acts of nature, he starts by dividing the first between the acts by which reason attains certitude with necessity and those where it attains it most of the time. Whence, among the latter, some acts will be successful, others not. Thus, Thomas divides into three: the two *Analytics* against the *Topics* and against the *Sophistical Refutations*.

Now, Aristotle's own division seems to be into two: placing the two *Analytics* together, and the *Topics* and the *Sophistical Refutations* together. That Aristotle joined the *Prior Analytics* with the *Posterior Analytics* is shown by the common proemium to them in the beginning of the *Prior Analytics* (I 1.24a10-15), and the common epilogue to them near the end of the *Posterior Analytics* (II 19. 99b15-19). Furthermore, Aristotle always considers them together under the title τὰ Ἀναλυτικά. Indeed, the division into *Prior* and *Posterior Analytics* is not from Aristotle, but it is ancient: it already figures in the catalogue of Pre-

Andronican origin, transmitted by Diogenes Laercius.⁶ That Aristotle joined the *Topics* with the *Sophistical Refutations* is also shown by the common proemium to them in the beginning of the *Topics* (I 1.100a18-21) and the common epilogue to them near the end of the *Sophistical Refutations* (34. 183a-184b8). Moreover, Aristotle often refers to the *Sophistical Refutations* under the name of the *Topics*, such that it is rather unanimously considered to be the ninth book of the latter.⁷ Together, they form a treatise that makes up almost half of the *Organon*.⁸ Also, in the *Topics* (I 1.100a21-24; 101a18-19), Aristotle divides the syllogism into four species. Insofar as there is the same knowledge of opposites and that division makes clear what these opposites are, it corresponds to this division into two suggested by the *proemia* and epilogues.

But this division seems strange and contrary to Aristotle's procedure elsewhere. For example, in the *Nicomachean Ethics*, he considers moral virtue in general in Book II and then its species in Books III, IV and V. He does not consider moral virtue in general with one of its species and then consider the remaining species. It indeed seems reasonable to consider the genus (or quasi genus) and then all the species one by one (as Aristotle does, for example in natural philosophy, first examining motion in general, and then the kinds of motion); not the genus with one species and then the remaining species.

We can, however, suggest several reasons for Aristotle's way of proceeding here. First of all, both *Analytics* teach analysis (resolution into principles) and therefore how to get to certitude. Now, when its object is a syllogism, this judgment depends on a resolution in both form and matter. Indeed, before reason can be sure that the conclusion of a syllogism is necessarily true, it must consider separately two things: Does the conclusion follow necessarily from the premises? And are the premises necessarily true? Seeing this, one better understands that the considerations of the syllogism and of demonstration are not entirely separate.

Moreover, as both Ammonius and Alexander explain in the *proemia* at the beginning of their commentaries on the *Prior Analytics*, the entire consideration of the syllogism is ordered

⁶ Nonetheless, the earlier traces of this distinction are in the commentary of Alexander on the first book of the *Prior Analytics*. See Ross 1957, 1; Tredennick 1989, 2; Brunschwig 1989, 495.

⁷ For a discussion of the arguments in favor of considering the *Sophistical Refutations* as the ninth book of the *Topics*, see Brunschwig 1967, xvii-xx; Smith, 1997, xvi, xxxiv, xxv.

⁸ See Berti 1970, 33.

to demonstration, which is its most perfect species—the κυριώτατος τῶν συλλογισμῶν, says Alexander (*In Top.* 15.24-25).⁹ Without wishing to go into greater depth in this difficult question, it is noteworthy that in logic there seems not to be a common consideration wherein one act is ordered to another. This is seen in the first division of the whole of logic into three parts, corresponding to three acts of reason (understanding what a thing is, understanding the true or the false, and reasoning). Since the first act is ordered to the second, and the second, to the third, there is no common consideration of the three acts. That is, there is no book about what is common to the three acts of reason. And that would also be the case in the division of the third act.

One could ask why it is that when, in the *Prior Analytics*, Aristotle takes up the genus syllogism at the same time as its most perfect species, demonstration, he also presents the other forms of reasoning (induction, example, etc.). The reason is that however economical Aristotle may have sought to be, he still had to consider the forms that decline from the perfection of the genus in order to understand it adequately. So we must not take the length of the *Prior Analytics* as a sign of its autonomy.

Besides, there are other places where Aristotle does not consider the general by itself before the particular. Let us recall the considerations of noun and verb in the *De Interpretatione* and those of tragedy and epic in the *Poetics*. Aristotle in fact defines tragedy and epic without defining what they have in common separately. Indeed, if drama is a genus, Aristotle has no separate consideration of it. And noun is first defined, and then verb, rather than name or word first as common to both. But what is common to both comes out in seeing the difference of the second from the first. The *Analytics* is not exactly like this, for Aristotle does define syllogism in common before he defines demonstration.¹⁰ Nevertheless, the consideration of demonstration is put together in the same book or books.

⁹ Brunschwig 1989, 495 says, 'Le texte montre (...) qu'aux yeux d'Aristote, cet ensemble [*An. pr.* and *An. post.*] constituait une unité, au moins à partir du moment où la dernière main y a été mise, et que son sujet proprement dit était la démonstration, le syllogisme n'étant étudié, en principe, qu'en sa qualité de genre dont la démonstration est l'espèce la plus intéressante'.

¹⁰ Aristotle announces in *An. pr.* I 4.25b26-31, that he is going to treat the syllogism before treating demonstration because of its more general character: ὕστερον δὲ λεκτέον περὶ ἀποδείξεως. πρότερον δὲ περὶ συλλογισμοῦ λεκτέον ἢ περὶ ἀποδείξεως διὰ τὸ καθόλου μᾶλλον εἶναι τὸν συλλογισμόν· ἢ μὲν γὰρ ἀπόδειξις συλλογισμός τις, ὁ συλλογισμὸς δὲ οὐ πάς ἀπόδειξις.

It would seem that the case that interests us is closer to that of the *Poetics* than to that of the *De Interpretatione*. The reason for proceeding in the *Poetics* in the manner described seems to be that the other forms, such as epic, have a tendency to move towards tragedy, just as demonstration is the goal of other forms of reasoning. Thus, just as in the *Poetics* the consideration of what is common to tragedy and epic is found in the consideration of tragedy, and tragedy is higher than epic, so the consideration of the form of the syllogism, which is common to demonstration and dialectical syllogism, would be attached to the consideration of the higher form, demonstration (although in a separate book).

Having said this about Aristotle's own division of his treatises on the syllogism, what can we say about the two divisions that we find in the tradition? The division into two is certainly useful for helping us to understand one aspect of the relations between the study of the forms of reasoning and the diverse subject matters in which these forms take flesh. But the division into three seems to fit better Aristotle's own division. In the division into two, the doctrine of the *An. pr.* would be distinguished from that found in the *Posterior Analytics*, as the genus is distinguished from the species and the form of argument from the various matters in which it can be realized. But Aristotle clearly joined the teaching of the *Prior Analytics* with that of the *Posterior Analytics*. Thus, not only does the division into three have the advantage of respecting Aristotle's grouping of the *Analytics*, but it allows us to at least see a reason for it (the first of those suggested):

Pars autem Logicae, quae primo deservit processui, pars *Iudicativa* dicitur, eo quod iudicium est cum certitudine scientiae. Et quia iudicium certum de effectibus haberi non potest nisi resolvendo in prima principia, ideo pars haec *Analytica* vocatur, idest resolutoria. Certitudo autem iudicii, quae per resolutionem habetur, est, vel ex ipsa *forma* syllogismi tantum, et ad hoc ordinatur liber *Priorum analyticorum*, qui est de syllogismo simpliciter; vel etiam cum hoc ex *materia*, quia sumuntur propositiones per se et necessariae, et ad hoc ordinatur liber *Posteriorum analyticorum*, qui est de syllogismo demonstrativo. (Aquinas, *In Post. Anal.* #6)

Nor is there any doubt that the division into three respects Aristotle's division into two, from which it only differs by being more precise; by omitting a subdivision we in fact get the same division into two.

Attendendum est autem quod actus rationis similes sunt, quantum ad aliquid, actibus naturae. Unde et ars imitatur naturam in quantum potest. In actibus autem naturae invenitur triplex diversitas. In quibuscumque enim natura ex necessitate agit, ita quod non potest deficere. In quibusdam vero natura ut frequentius operatur, licet quandoque possit deficere a proprio actu. Unde in his necesse est esse duplicem actum; unum, qui sit ut in pluribus, sicut cum ex semine generatur animal perfectum; alium vero quando natura deficit ab eo quod est sibi conveniens, sicut cum ex semine

generatur aliquod monstrum propter corruptionem alicuius principii.
(Aquinas, *In Post. Anal.* #5)

I would even say that Aristotle sometimes approaches very close to the precision of the division into three. In the *Sophistical Refutations*, first, he divides into four:

ἔστι δὴ τῶν ἐν τῷ διαλέγεσθαι λόγων τέτταρα γένη,
διδασκαλικοὶ καὶ διαλεκτικοὶ καὶ πειραστικοὶ καὶ
ἐριστικοί. (*Soph. el.* 2.165a38-39)¹¹

And then after having described each of these types of arguments entering into a discussion, he brings them together into three treatises:

περὶ μὲν οὖν τῶν ἀποδεικτικῶν ἐν Ἀναλυτικοῖς
εἴρηται, περὶ δὲ τῶν διαλεκτικῶν καὶ πειραστικῶν ἐν
ἄλλοις· περὶ δὲ τῶν ἀγωνιστικῶν καὶ ἐριστικῶν νῦν
λέγωμεν. (*Soph. el.* 2.165b8-11)¹²

DIVISION OF THE *TOPICS* INTO THE PROEMIUM (I, CHAPTERS 1-3) AND THE TREATISE (I, CHAPTER 4-VIII)

The first division of the *Topics* is into the proemium and the treatise. Let us start, then, by looking at each.

THE PROEMIUM

The Proemium¹³ to the *Topics* (and to the *Sophistical Refutations* as well) is found in Book I, Chapters 1-3, 100a18-101b10. It can be divided into three parts. The first of these is

¹¹ 'Of arguments used in discussion there are four kinds, didactic, dialectical, examination-arguments and contentious arguments.' Forster translation

¹² 'Demonstrative arguments have been treated in the *Analytics*, and dialectical arguments and examinations have been dealt with elsewhere. Let us now deal with competitive and contentious arguments.' Forster translation

¹³ The word προίμιον is formed from πρό (before) and from οἶμος (road). Thus, προίμιον says, 'placed at the beginning', but yet still indicating the road, that is, what paves the way. The purpose then of the proemium is to lay out the road for us from the beginning, and that is why it is placed at the start. My choice of 'proemium' is dictated by a desire to keep its full philosophical meaning, and to avoid the more poetical or rhetorical sense of the modern uses of the word, as well as the ambiguities of such words as 'preface', 'prologue', 'foreword', 'introduction', etc.) which do not necessarily indicate those elements essential to a proemium, namely the things to be seen and the order. (An introduction, for example, should show us the

Chapter 1, which constitutes the πρόθεσις τῆς πραγματείας. The second part is Chapter 2 and concerns πρὸς πόσα τε καὶ τίνα χρήσιμος ἡ πραγματεία. The third part is Chapter 3 and is about the perfect possession of the method (μέθοδος). Here is how Alexander starts his commentary:

Τὴν μὲν πρόθεσιν τὴν κατὰ τὴν τοπικὴν πραγματείαν, καὶ πρὸς πόσα τε καὶ τίνα χρήσιμος ἐστὶ τῷ φιλοσοφούντι ἤδε ἡ μέθοδος, καὶ τί τὸ τέλος αὐτῆς, αὐτὸς λέγει, τὸ μὲν ἀρχόμενος εὐθύς, τὸ δὲ ὀλίγον προελθὼν, δι' ὧν γνώριμον ποιεῖται ὅτι καὶ τοῖς προηγουμένως φιλοσοφούσιν ἀξία σπουδῆς ἢ διαλεκτικῆ, πρὸς τὴν εὕρεσιν τῆς ἀληθείας αὐτοῖς συντελοῦσα, ὃ τέλος ἐστὶ τῆς φιλοσόφου θεωρίας. (*In Top.* 1.3-8)

Albert divides the *Topics* more explicitly into a proemium, which treats 'de his quae praemittenda sunt' beginning with the purpose, and then the treatise (*In Top.* 235b). Then, starting into Chapter 2, he says:

Sequens autem erit his quae prooemialiter dicta sunt, dicere ad quot et quae negotium hoc sit utile: in hoc enim finitur pars prooemialis. (*In Top.* 246a)

But he also considers Chapter 3 to be a part of this preliminary consideration since he comments on it before concluding concerning those things which have been said 'in the manner of a proemium' (*prooemialiter*). What Albert calls a 'proemium', Pacius names a 'παιδεία dialectica'. It includes, as does the proemium of Albert and ours, the three first chapter of Book 1:

Primi libri tres sunt principes partes. Nam tria prima capita continent praemunitiones seu παιδείαν dialecticam, id est, subiectum dialecticae cap. 1. utilitatem cap. 2. & rationem cognoscendi perfectum dialecticum cap. 3. (*In Top.* 351a)

Maurus puts the same text into a proemium, with this difference that he puts together in one chapter what has been passed on to us as Chapters 2 and 3 (*In Top.* 391#12). Many Moderns

way into something, but does not necessarily show the elements of a proemium, and may well show other things that are not part of the latter.) The division into proemium and treatise is very common in Aristotle's works and the reasons are similar; it is always important to indicate the goal before starting. Thus, if not all proemia contain the same elements, the σκοπός or πρόθεσις is always there. (For more details on how the Neo-Platonic school developed this idea and applied it to Aristotle's works, see Paul Moraux 1973, 81 seq.)

have kept this division: Pickard-Cambridge (McKeon ed.) and Forster (Loeb ed.) classify the first three chapters of Book I as an introduction. Brunschwig calls them 'préliminaires'.

DIVISION OF THE TREATISE INTO THE SUBSTANCE OF THE METHOD (I, CHAPTER 4-VII) AND ITS USE IN DISCUSSION (VIII)

Now, what is the division of the treatise? The treatise has two parts. In the first part, Aristotle teaches the substance or the essence of the method itself:

Πρῶτον οὖν θεωρητέον ἐκ τίνων ἡ μέθοδος. (*Top.* I 4.101b11)¹⁴

Whereas, in the second part, he shows how to use the method in discussion with another:

μετὰ δὲ ταῦτα περὶ τάξεως καὶ πῶς δεῖ ἐρωτᾶν λεκτέον. δεῖ δὲ πρῶτον μὲν ἐρωτηματίζειν μέλλοντα τὸν τόπον εὔρειν ὅθεν ἐπιχειρητέον, δεύτερον δὲ ἐρωτηματίσαι καὶ τάξαι καθ' ἕκαστα πρὸς ἑαυτόν, τὸ δὲ λοιπὸν καὶ τρίτον εἰπεῖν ἤδη ταῦτα πρὸς ἕτερον. μέχρι μὲν οὖν τοῦ εὔρειν τὸν τόπον ὁμοίως τοῦ φιλοσόφου καὶ τοῦ διαλεκτικοῦ ἢ σκέψις, τὸ δ' ἤδη ταῦτα τάττειν καὶ ἐρωτηματίζειν ἴδιον τοῦ διαλεκτικοῦ· πρὸς ἕτερον γὰρ πᾶν τὸ τοιοῦτον. τῷ δὲ φιλοσόφῳ καὶ ζητοῦντι καθ' ἑαυτόν¹⁵ οὐδὲν μέλει, ἐὰν ἀληθῆ μὲν ἦ καὶ γνώριμα δι' ὧν ὁ συλλογισμὸς, μὴ θῆ δ' αὐτὰ ὁ ἀποκρινόμενος διὰ τὸ σύγγενυς εἶναι τοῦ ἐξ ἀρχῆς καὶ προορᾶν τὸ συμβησόμενον, ἀλλ' ἴσως κἂν σπουδάσειεν ὅτι μάλιστα γνώριμα καὶ σύγγενυς εἶναι τὰ ἀξιώματα· ἐκ τούτων γὰρ οἱ ἐπιστημονικοὶ συλλογισμοί. (*Top.* VIII 1.155b3-16)¹⁶

¹⁴ 'First, then, we must consider what our method consists of.' Smith translation

¹⁵ This is the kind of undertaking that is meant when one brings up the possibility of a discussion with oneself, as we shall see later.

¹⁶ 'After this we should discuss arrangement, that is, how one should ask questions. First, then, the person who is going to be devising questions must find the location from which to attack; second, he must devise the questions, and arrange them individually, to himself; and only third and last does he ask these of someone else. Now, up to the point of finding the location, the philosopher's inquiry and the dialectician's proceed alike, but actually arranging these things and devising questions is unique to the dialectician. For all of that is directed at someone else. But the philosopher, or someone searching by himself, does not care if the 'premisses' through which his deduction comes about are true and intelligible but the answerer does not concede them because they are close to the initial goal and he foresees what is going to result; rather, the philosopher would in fact

Book VIII bears principally on the discussion with another whose good moral and intellectual disposition one is not sure of, and with whom one must use certain strategies to test, or quite simply to argue, since this is the only way to proceed.¹⁷

The beginning of Book VIII is very like the beginning of Book III of the *Rhetoric* :

Ἐπειδὴ τρία ἐστὶν ἃ δεῖ πραγματευθῆναι περὶ τὸν λόγον, ἓν μὲν ἐκ τίνων αἱ πίστεις ἔσονται, δεύτερον δὲ περὶ τὴν λέξιν, τρίτον δὲ πῶς χρὴ τάξαι τὰ μέρη τοῦ λόγου, περὶ μὲν τῶν πίστεων εἴρηται, καὶ διὰ τί τοσαῦτα μόνα· ἢ γὰρ τῷ αὐτοῖ τι πεπονθέναι οἱ κρίνοντες, ἢ τῷ ἀποδεδείχθαι πείθονται πάντες. εἴρηται δὲ καὶ τὰ ἐνθυμήματα, πόθεν δεῖ πορίζεσθαι· ἔστι γὰρ τὰ μὲν εἶδη τῶν ἐνθυμημάτων, τὰ δὲ τόποι. Περὶ δὲ τῆς λέξεως ἐχόμενόν ἐστὶν εἰπεῖν· οὐ γὰρ ἀπόχρη τὸ ἔχειν ἃ δεῖ λέγειν, ἀλλ' ἀνάγκη καὶ ταῦτα ὡς δεῖ εἰπεῖν, καὶ συμβάλλεται πολλὰ πρὸς τὸ φανῆναι ποιόν τινα τὸν λόγον. τὸ μὲν οὖν πρῶτον ἐζητήθη κατὰ φύσιν, ὅπερ πέφυκε πρῶτον, αὐτὰ τὰ πράγματα ἐκ τίνων ἔχει τὸ πιθανόν· δεύτερον δὲ τὸ ταῦτα τῇ λέξει διαθέσθαι· τρίτον δὲ τούτων, ὃ δύνάμιν μὲν ἔχει μεγίστην, οὕπω δ' ἐπικεχείρηται, τὰ περὶ τὴν ὑπόκρισιν, (*Rh.* III 1.1403b5)¹⁸

probably be eager for his claims to be as intelligible and as close <to the initial goal> as possible, for it is from such that scientific deductions proceed.' Smith translation

¹⁷ See *Top.* VIII 11.161b6-10 and 14.164b8-15.

¹⁸ 'There are three things which require special attention in regard to speech: first, the sources of proofs; secondly, style; and thirdly, the arrangement of the parts of the speech. We have already spoken of proofs and stated that they are three in number, what is their nature, and why there are only three; for in all cases persuasion is the result either of the judges themselves being affected in a certain manner, or because they consider the speakers to be of a certain character, or because something has been demonstrated. We have also stated the sources from which enthymemes should be derived—some of them being special, the others general places. We have therefore next to speak of style; for it is not sufficient to know what one ought to say, but one must also know how to say it, and this largely contributes to making the speech appear of a certain character. In the first place, following the natural order, we investigated that which first presented itself—what gives things themselves their persuasiveness; in the second place, their arrangement by style; and in the third place, delivery which is of the greatest importance, but has not yet been treated of by any one.' Freese translation, slightly modified.

In both places, Aristotle indeed recapitulates, saying that he must still consider the ways in which the premises must be *disposed*¹⁹ given the particular dispositions of the auditors:

interrogata conclusione et loco unde arguendum est invento, tunc oportet eum formare interrogationes proponendas in forma, quibus magis efficiuntur concessibiles a respondente, et ordinare singula ad se invicem et ad seipsum, ut videat quo ordine magis sint concessibilia et verisimiliora ad concedendum. (Albert, *In Top.* 492a)

La diversité des enjeux dialectiques appelle un talent aux multiples facettes. On le remarque déjà chez l'orateur: se munir de preuves, leur faire suivre l'itinéraire le plus avantageux, les moduler sur un ton qui les impose à l'auditeur engendrent des opérations assez irréductibles pour stimuler l'exercice d'une diversité équivalente de puissances. Celles-ci commandent au moins trois moments distincts dans l'élaboration d'une rhétorique: "C'est en premier ce qui vient en premier par nature qui a fait objet d'enquête: d'où les choses elles-mêmes tiennent-elles ce qu'elles ont de croyable? en second leur disposition quant à l'expression; en troisième, et comportant beaucoup de puissance, ce qui regarde l'action." (*Rhét.*, III, 1, 1403b15-21.) Le dialecticien se compare de près à l'orateur. La méthode qui le dirige n'économise pas beaucoup plus facilement sur les parties intégrantes de son talent (...) le dialecticien ne mènera pas son opération à bon terme s'il ne tient pas compte, de manière très concrète, de l'interlocuteur singulier qu'il a devant lui. (Pelletier 1991, 251-2)

Now, Aristotle himself says of this book of the *Rhetoric*, which considers not only the disposition, but also the style and the action, that it is less essential to this science (*Rh.* I 1.1354a11-18).²⁰ The rhetorical method, moreover, presents many likenesses with dialectic,²¹ as Aristotle himself affirms (*Rh.* I 1.1354a). In both cases we have natural abilities perfected by methods that allow one to argue better, and which are not limited to some one particular genus (*Rh.* I 2.1355b25). The two abilities for furnishing arguments²² can argue to contraries (*Rh.* I 1.1355b29) and they make use of places²³ (*Rh.* I 2.1358a10), and further, as we shall

¹⁹ Smith 1997, 20; 104 speaks of 'arrangement'. Aristotle thus ended Book II: λοιπὸν δὲ διελεῖν περὶ λέξεως καὶ τάξεως.

²⁰ See Maurus, *In Top.* 641#4.

²¹ See De Pater 1968, 168-169.

²² δυνάμεις τινὲς τοῦ πορίσαι λόγους (*Rh.* I 2.1356a33). Besides, Aristotle stresses the likeness between the enthymeme and the syllogism, and between the example and the induction (καλῶ δ' ἐνθύμημα μὲν ῥητορικὸν συλλογισμόν, παράδειγμα δὲ ἐπαγωγὴν ῥητορικῆν. *Rhetor.* I, 2, 1356b4.), and, in order to explain these, he refers to the definitions that he gave of these more perfect forms in the *Topics* (I, 1, 100a25 et I, 12, 105a13)). See *Rhetor.* I, 2, 1356a35 et seq.

²³ I have chosen to keep the literal translation of τόπος as 'place' for several reasons. First, there seem to be reasons for Aristotle's choosing this word, which in Greek has the same meaning as 'place' in English. (It

seems that the word τόπος, taken in its logical sense, was not in current use before Aristotle. Brunschwig 1967, xxxviii, n1 notes that there are only a few examples to be found in Isocrates, and with the rather vague sense of 'theme' or of 'subject' (whence, probably the translations of τόποι by 'topics'), giving to an oratorical development its main guidelines.) Now, keeping the English equivalent may help us to discover these reasons. Might it be that just as place in the physical sense is the 'immobile first limit of the containing' (*Ph.* IV 4.212a20), so place in the logical sense contains arguments: ἔστι γὰρ στοιχείον καὶ τόπος, εἰς ὃ πολλὰ ἐνθυμήματα ἐμπίπτει (*Rh.* II 26.1403a17). Τῇ περιγραφῇ μὲν ὠρισμένος, says Theophrastus (Alexander, *In Top.* 5.23). The arguments, therefore, are to be found in their places like natural things in theirs. Thus, as natural place is exterior to and independent of the body it contains ('it is nothing of the thing' (*Ph.* IV 4.210b34); 'it can leave it escape and it is separable from it' (211a2)), so too the logical place is extrinsic and independent of the argument that it contains. For it is not a part of the argument any more than a determinate argument necessarily exists following the use of the place, which contains potentially a multiplicity of arguments: 'Il n'est rien de l'argument, il est hors de lui et antérieur à lui, comme le lieu où vient à se placer une chose naturelle; il n'est d'ailleurs normalement pas donné dans la discussion' (Pelletier 1991, 287). Furthermore, like a physical place, the logical place is immobile and remains the same, whatever it contains. *Contraries are attributed to contraries; definition and defined have the same subjects and attributes.* These are immobile and necessary rules. The ancient authors developed this analogy. The premises of the arguments are 'in a place', Alexander tells us (*In Top.* 126.30-31). Cicero, whose terminology was later adopted by the whole Latin tradition, put it thus: 'Ut igitur earum rerum quae absconditae sunt demonstrato et notato loco facilis inventio est, sic, cum pervestigare argumentum aliquod volumus, locos nosse debemus; sic enim appellatae ab Aristotele sunt eae quasi sedes, e quibus argumenta promuntur. Itaque licet definire locum esse argumenti sedem' (*Top.* 2). Quintilian speaks of it in this fashion: 'Locus appello (...) sedes argumentorum, in quibus latent, ex quibus sunt potenda. Nam, ut in terra non omni generantur omnia, nec avem aut feram reperias, ubi quaeque nasci aut morari soleat ignarus, et piscium quoque genera alia planis gaudent alia saxosis, regionibus etiam litoribusque discreta sunt, nec helopem nostro mari aut scarum ducas, ita non omne argumentum undique venit ideoque non passim quaerendum est. Multus alioqui error est; exhausto labore, quod non ratione scrutabimur, non poterimus invenire nisi casu. At si scierimus, ubi quodque nascatur, cum ad locum ventum erit, facile quod in eo est pervidebimus' (*De Institutione Oratoria* V 10#20-22). Boethius also adopts this definition of place as the natural seat of the dialectical argument: 'Locus namque est (ut M. Tullio placet) sedes argumenti' (*De differentiis topicis*, 1185); 'Ac sicut locus in se corporis continet quantitatem, ita hae propositiones quae sunt maximae, intra se omnem vim posteriorum atque ipsius conclusionis consequentiam tenent' (*De differentiis topicis*, 1186). And the scholastic tradition, among whom we find Fonseca, Garlandus and Toletus, is generally content with taking over this definition, often quite literally. Today there are still many who draw their inspiration from this traditional description. But one recent trend seeks the right explanation in a less fundamental sense of τόπος: the mnemonic place. See Smith 1995, 61; 1997, xxvii; 1994, 147. There is certainly a likeness between the way the mind discovers arguments and that by which memory rediscovers things previously known. Moreover, Aristotle himself refers to this in order to make manifest the usefulness of a good mastery of the dialectical places: 'You should also try to master those problems under which other arguments most often fall. For just as in geometry it is useful to have gone through exercises with the elements, or as in arithmetic having the multiplication table at your fingertips makes a great difference when figuring a multiple of some other number, so too in the case of arguments are having things at your fingertips when it comes to the starting-points and learning premisses until they are on the tip of your tongue. For just as in the art of remembering, the mere mention of the places instantly makes us recall the things, so these will make us more apt at deductions through looking to these defined premisses in order of enumeration' (*Top.* VIII 14.163b19-32, Smith translation). Whence, I believe, translations such as 'common places' (Forster) and 'commonplace rules' (Pickard Cambridge), 'lieux communs' (Thionville). But these are interpretations. Indeed, *commonplace* is translated from the Latin *locus communis*. It means 1) A passage of general application; 2) a notable passage entered for use in a commonplace book; 3) a commonplace book; 4) a statement commonly accepted; a stock theme; a platitude. (*Oxford Universal Dict.* 1955) Thus, these expressions apply to much more than the logical places. (Colli is to be found in this current of authors who do not retain the allusion to physical place, but he renders τόποι by a term, *schemi* which is still more abstract than is the mnemonic place. See 1955, 927.) Principally, however, I do not believe that a reference to mnemonic places clarifies the nature of the dialectical place. These mnemonic places consists in associating images of what one wishes to recall with other images, as Aristotle himself describes it: 'it is possible to call up mental pictures, as those do

see, there are many indications of the fact that there must exist an element of the method which in rhetoric plays the same role as the tool in dialectic. Both can also reason truly or only apparently (*Rh.* I 1.1355b15).

Whence, it seems legitimate to think that as our division suggests, the eighth book of the *Topics*, which describes disposition, is less essential than the other seven, just as is book III of the *Rhetoric*.²⁴

Furthermore, Aristotle says explicitly that we must discover those proofs that belong to the rhetorical art:

Τῶν δὲ πίστεων αἱ μὲν ἄτεχνοί εἰσιν αἱ δ' ἔντεχνοι.
 Ἄτεχνα δὲ λέγω ὅσα μὴ δι' ἡμῶν πεπόρισται ἀλλὰ
 προὑπῆρχεν, οἷον μάρτυρες βάσανοι συγγραφαὶ καὶ ὅσα
 τοιαῦτα, ἔντεχνα δὲ ὅσα διὰ τῆς μεθόδου καὶ δι' ἡμῶν
 κατασκευασῆναι δυνατόν. ὥστε δεῖ τούτων τοῖς μὲν
 χρῆσασθαι τὰ δὲ εὐρεῖν. (*Rh.* I 2.1356a)²⁵

who employ images in arranging their ideas under a mnemonic system' (*De an.* III 3. 427b18-20) These images are chosen in a very arbitrary way. Now, dialectical places are formed from second intentions, which do not fall under imagination, and it is not just any that can be associated with the terms of an argument. Further, even authors favorable to the 'mnemonic analogy', such as Smith 1997, xxx see an order required by the predicables between the places of Books II to VII, whereas the order of the images in mnemonic places is not determined since the images themselves are not determined. Thus, Cicero says that, following the advice of Simonides, one ought to choose in thought some distinct locations, then form images of the things one wants to retain, then place these images in the locations. Then the order of the places will keep the order of the things: the images recall the things themselves. ('Itaque iis, qui hanc partem ingeni exercerent, locos esse capiendos et ea, quae memoria tenere vellent, effingenda animo atque in iis locis collocanda; sic fore, ut ordinem rerum locorum ordo conservaret, res autem ipsas rerum effigies notaret.' *Orat.* II.) It is, therefore, difficult to think that Aristotle, who devoted many chapters of his *Physics* to natural τόποι, would have had in mind rules thanks to which one could order any old images indifferently when calling the sources of dialectical abundance τόποι. In any case, even if I find Pelletier too conciliatory towards this interpretation, I do agree that the heuristic-mnemotechnique affinity, even if this were the case, would not dispense us from returning to the physical place to understand the extension de τόπος to the logical place. For if Aristotle had named the dialectical place after the mnemonic one, it would still not follow that their name coincided with the name of the physical place by pure homonymy. See Pelletier 1991, 285-290 and 1981, 55-60. Moreover, many translators in many languages have kept this literal translation. See Brunshwig, as well as Smith's recent translation which generally uses 'place' or 'location'.

²⁴ This is what Waitz 1846, 511 says of Book VIII: 'Reliquum est, ut etiam ea exponat, quae, quamquam non necessaria sint ad probandum quod velis, tamen requiruntur, ut disputatio et apte instituat et rite procedat'. On the legitimacy of interpreting the method of the *Topics* in the light of the *Rhetoric*, see De Pater 1968, 168-169, who affirms that, given the numerous likenesses between the two methods.

²⁵ 'As for proofs, some are inartificial, others artificial. By the former I understand all those which have not been furnished by ourselves but were already in existence, such as witnesses, tortures, contracts, and the like; by the latter, all that can be constructed by system and by our own efforts. Thus we have only to make use of the former, whereas we must invent the latter.' Freese translation. See Maurus, *In Rh.* 647#2.

The means for carrying out this discovery are given in Books I and II, and he speaks about them as means for abounding in arguments, just as he speaks about the tools and the places in the *Topics*.²⁶ Further yet, rhetoric, like dialectic, has, preceding the presentation of the means for abounding in proofs, certain general considerations laying out the natures of these proofs in which it will be a question of having in abundance. Indeed, between *Rhetoric* I Ch. 2 (depending on where one thinks the proemium ends), and I 4 as in *Topics* I 4-I 12, one finds general considerations: a definition of rhetoric, of the believable (τὸ πιθανόν); reflections on the nature of the enthymeme and of the example, on the problem; as well as a division of the genera of rhetorical subjects as, in the *Topics*, one finds a definition of dialectic, of the probable, of the syllogism and induction, of the problem, as well as a division of the premises and problems. The place where Aristotle most likely starts these general considerations in the *Rhetoric* is moreover very like the passage of the *Topics* where he begins considerations of the same type. One has only to compare the end of Chapter 1 of Book I of the *Rhetoric* (1355b21) to the beginning of Chapter 4 of Book I of the *Topics*.

Thus, I think that ‘discovery’ would be the best way of describing the object of what is most essential in dialectical method also. The Latin tradition seems moreover to have chosen this denomination.²⁷ Indeed, according to Post-Aristotelian developments of the art, De Pater claims, in the three oratorical genera, the subject to be treated requires five operations, of which one, to find the propositions and the arguments on the subject, is called ‘inventio’. Now, this is the natural place for the consideration of the tools and places:

Le terme ‘inventio’, au sens que nous venons d’indiquer, n’a pas d’équivalent chez Aristote. Mais il va de soi que la chose elle-même se trouve chez lui: tout rhéteur doit savoir trouver les éléments dont il compose son discours. Aussi y a-t-il, chez Aristote, des indications sur la façon dont il faut trouver ces éléments. En ce sens on peut parler d’une méthodologie aristotélicienne de l’*inventio*. (De Pater 1968, 169-170)

Besides, when at the beginning of Book VIII Aristotle recapitulates what he has done up to this point, he himself speaks of *Topics* I 4 through VII as about ‘discovery’. Maurus begins

²⁶ At the end of Book II, Aristotle says: ἐπεὶ δὲ δὴ τρία ἐστὶν ἃ δεῖ πραγματευθῆναι περὶ τὸν λόγον, ὑπὲρ μὲν παραδειγμάτων καὶ γνωμῶν καὶ ἐνθυμημάτων καὶ ὅλως τῶν περὶ τὴν διάνοιαν, ὅθεν τε εὐπορήσομεν καὶ ὡς αὐτὰ λύσομεν, εἰρήσθω ἡμῖν τσσαῦτα (*Rh.* II 26.1403a33-b2).

²⁷ See Boethius, Quintilian, Cicero. See also Pelletier 1979, 7-8.

his commentary to Book VIII by words that well describe how I also look at the division of the treatise into two parts (I 4-VII versus VIII):

Ad disputationem dialecticam duo sunt necessaria, quorum alterum ad inventionem, alterum ad dispositionem referri videtur. Primum, quod ad inventionem spectat est, ut Dialecticus habeat copiam argumentorum ad proposita problemata; secundum, quod ad dispositionem refertur, est, ut sciat ordinate interrogare ac respondere. Aristoteles igitur, postquam superioribus libris, exponendo locos, tradidit artem inveniendi argumenta, octavo et ultimo libro agit de modo ordinate interrogandi ac respondendi, adeoque tradit artem disponendi ac proponendi ea, quae fuerint inventa. (Maurus, *In Rh.* 538#1)

Besides, the specificity and the more concrete context of Book VIII are rather generally admitted. In one of the three versions of the beginning of his commentary to this book, Alexander says:

Ἐν τῷ πρώτῳ τὴν διαίρεσιν ποιησάμενος τῶν διαλεκτικῶν προβλημάτων καὶ δείξας ὅτι τέσσαρα ἔστιν, παραδοὺς δὲ καὶ τοῖς μετ' ἐκεῖνο βιβλίοις καὶ τοὺς πρὸς ἕκαστον γένος τῶν προβλημάτων τόπους, δι' ὧν οἷσι τε ἐσόμεθα εὐπορεῖν ἐπιχειρημάτων πρὸς τε τὰς ἀνασκευὰς τῶν προβλημάτων καὶ πρὸς τὰς κατασκευὰς, ἐν τούτῳ ὄντι τελευταίῳ τῆς πραγματείας περὶ τῆς χρήσεως αὐτῶν ποιεῖται τὸν λόγον· οὐ γὰρ αὐτάρκης ἢ τῶν τόπων εὕρησις τῷ διαλεκτικῷ πρὸς τὸ συλλογίζεσθαι δι' αὐτῶν τὸ προκείμενον, ἀλλὰ δεῖ αὐτῷ καὶ ποιᾶς τάξεως αὐτῶν καὶ χρήσεως. (*In Top.* 519.6-13)

Albert sees in Book VIII that part of dialectic that consists in an art whose ends are obviatio and exercitatio (*In Top.* 491). According to Pacius, Book VIII treats of the practice, but no longer of the *inventio* (this is also a part of what Pacius calls the 'practical part' of dialectic). According to him, Book VIII is concerned with the *dispositio*, the *interrogatio*, the *responsio* and the *exercitatio* :

Hoc enim opus tam theoriam quam praxim dialecticam continet. Theoriae duae sunt partes. Prior principia quaedam declarat, quorum expositionem vocare possumus παιδειαν dialecticam. posterior materiam dialecticae explanat. Praxis autem inventionem, dispositionem, interrogationem, responsionem, & exercitationem comprehendit. (...) Haec igitur omnia his libris Topicis continentur, nimirum primo libro παιδεία dialectica, materia dialecticae, & instrumenta inventionis: secundo autem libro & sequentibus

usque ad octauum loci dialectici: & octauo, qui liber ultimus est, dispositio, interrogatio, responsio, & exercitatio. (*In Top.* 351)²⁸

To the degree that Pacius also speaks about a large part of what we have called the ‘essential of the method’ and ‘the discovery’²⁹ in terms of discovery—the *inventio* that he mentions covers Book I, Chapter 13 through Book VII—he seems close to our position. But the others also. Alexander speaks of a method of discovery to designate the places.³⁰ One finds *inquisitio* in Albert and *inventio* in Maurus.

Pelletier, whose division of the treatise according to the integral parts of the method that it presents I have followed, also divides discovery, an essential part of the method going from I, Chapter 4 through VII against disposition (VIII), a part more accessory but still necessary.³¹ If in the other Moderns we do not find such a division—discovery versus disposition—we still do find the idea of a practice to which Book VIII is ordered. Le Blond 1939, 23 says that it is the most practical book; Brunschwig 1989, 500 affirms that Book VIII is an ‘appendice’ containing the ‘règles de la pratique dialectique’; Forster entitles it ‘The Practice of Dialectics’.

Division of Discovery into its Object (I, Chapters 4-12) and into The Means for Assuring Abundance of Discovery (I, Chapter 13-VII)

²⁸ See also 455 and Maurus, *In Rh.* 392#16.

²⁹ The whole part that we divided against Book VIII (as Books I and II of the *Rhetoric* against Book III) would be concerned with discovery. But, as it is normal to determine what it is that one is seeking to regulate the discovery of, this part is subdivided into two parts of which the first and shorter one is on the nature of dialectical arguments, and the second, longer, on the means for discovering abundantly. We will come back to this later.

³⁰ μέθοδον γάρ τινα εύρετικὴν τῶν ἐπιχειρημάτων ἔχοντες (αὕτη δὲ ἐστὶν ἡ τῶν τόπων γνῶσις) ῥᾶον ἐπιχειρεῖν δυνησόμεθα (*In Top.* 27.19-21).

³¹ See Pelletier 1991, 251-3. Among others: ‘Une autre préoccupation affleure ensuite à la conscience dialectique: on n’a pas toujours facilement quelque chose à dire, on éprouve souvent de la difficulté à sélectionner les voies offertes à l’attaque. (...) le besoin est si grand, la découverte de l’attaque est tellement capitale qu’on finit par souhaiter lui procurer une assistance méthodique. Aristote en fait, quant à lui, la préoccupation la plus essentielle de la méthode. Elle seule satisfaite, il croirait déjà avoir répondu à l’exigence d’une méthode pour former le dialecticien; quand, ailleurs, il est à former l’orateur, il classe comme accessoire tout ce qui sort de la découverte des preuves’ (252-3).

We can also divide the substance of the method between the distinction of the parts of dialectical argument (I, Chapters 4-12)— necessary for understanding the distinction and usefulness of the tools and places—and how we will be able to abound in these parts (I, Chapter 13-VII). Now, there are composing parts—the remote (Chapters 4-9) and the proximate (Chapters 10-11)—and subjective parts (Chapter 12). Finally, we will divide the aforesaid means for abounding into the four tools (I, Chapters 13-18) and the places for which the tools are useful (II-VII).³²

To determine the position of our authors as to the division of the substance of the method and of the means for abounding, we will have to examine their writings on two key texts of the *Topics*, which certainly ought to be looked at by those who are interested in the tools.

Aristotle begins Chapter 4 thus:

πρῶτον οὖν θεωρητέον ἐκ τίνων ἡ μέθοδος. εἰ δὲ λάβοιμεν πρὸς πόσα καὶ ποῖα καὶ ἐκ τίνων οἱ λόγοι, καὶ πῶς τούτων εὐπορήσομεν, ἔχοιμεν ἂν ἱκανῶς τὸ προκείμενον. (*Top.* I 4.101b11-13)³³

Alexander, claiming that he has said what is necessary to know about dialectic, namely, its purpose and its difference from the other syllogistic methods, its uses, as well as the perfection it aims at, declares that he must still treat of the constituent elements of the essence of dialectic (*In Top.* 34.9-12). Now, this seems to imply a study of the nature of the arguments. Indeed, the πρὸς πόσα καὶ ποῖα of Aristotle is understood by him, as by all the commentators, as we shall see, to be involved with the problems (the conclusions to be reached) and the ἐκ τίνων, with the premises:

εἴη δ' ἂν τὸ λεγόμενον 'εἰ εἰδείημεν ἐκ τίνων ἡ διαλεκτικὴ μέθοδος, καὶ ἐν τίσιν αὐτῇ τὸ εἶναι, καὶ μάθοιμεν πρὸς πόσα τε καὶ τίνα οἱ κατὰ ταύτην συλλογισμοὶ γίνονται καὶ ἐκ τίνων'. ἔστι δὲ τὸ μὲν πρὸς

³² Like Albert and Smith, I have indeed chosen the interpretation of *Topics* I 18.108b33 according to which the tools are said to be useful for the places. But it should be noted that that is only one possibility, for τὰ λεχθέντα can refer to the first book of the *Topics* as a whole, without specifically referring to the tools. This is Alexander's and Brunschwig's opinion.

³³ 'First, then, we must consider what our method consists of. Now, if we understood the number and kinds of things that arguments are about, what they are made of, and how we are to be equipped to deal with these, then we would have a sufficient grasp of our proposed subject.' Smith translation

πόσα τε καὶ ποῖα εἰρημένον περὶ τῶν προβλημάτων, ὡς ἔρεϊ· περὶ γὰρ τινος προκειμένου προβλήματος ὁ διαλεκτικὸς τὸν λόγον κινεῖ καὶ τὸν συλλογισμὸν ποιεῖται. δεῖ οὖν εἰδέναι πόσα τε καὶ τίνα ἐστὶ τὰ γένη τῶν προβλημάτων τῶν διαλεκτικῶν. τὸ δ' ἐκ τίνων περὶ τῶν προτάσεων. (Alexander, *In Top.* 34.21-28)³⁴

But the knowledge of the essence of dialectic seems to imply for Alexander, as it does for us, not only a study of the nature of the arguments, but also of the means for procuring dialectical arguments. And at this point, he has already divided the means for procuring an abundance of arguments into two—tools and places (*In Top.* 35.25).

Starting his commentary to Chapter 4, Albert affirms that having treated of what should come before the doctrine *proemialiter*, he must now move on to the doctrine itself and consider first what the method comes from ('*ex quibus est methodus*'). Now this means for Albert, as it did for Alexander, a consideration of the nature of the problems and propositions, as well as of the means for abundance (*In Top.* 250). We can note this difference between Albert and Alexander, that whereas the latter first places more accent on the tools as means for having an abundance but also mentions the places, Albert only mentions the places at this point (250). But he proposes right away an interesting explanation of the signification of the expression that Aristotle makes the goal of the second step: *abundance of arguments* (εὐπορήσομεν λόγων):

Abundantia autem est in multitudine sive multiplicatione mediorum, vel ad omnia, vel ad singula problemata. (Albert, *In Top.* 250b)

Like Alexander and Albert, Pacius considers that what dialectical arguments are about are problems and what they proceed from are propositions (*In Top.* 353). And as is the case for his two predecessors, according to Pacius, Aristotle starts Chapter 4 by announcing that he will devote himself not only to a consideration of the nature of the problems and propositions, but also to a study of the cause of their discovery—*ratio inuentionis*. At this point, Pacius also distinguishes the tools from the places. He indeed says that the second step of the

³⁴ Aristotle in fact gives answers to these two questions (ἐξ ὧν οἱ λόγοι (what are the constituent elements of arguments?) and πρὸς πόσα καὶ ποῖα (how many subjects, or more precisely *conclusions*, for argument are there and which are they?) himself in lines 15-16: γίνονται μὲν γὰρ οἱ λόγοι ἐκ τῶν προτάσεων· περὶ ὧν δὲ οἱ συλλογισμοί, τὰ προβλήματά ἐστι. It is clear that the premises are the answer to the question ἐξ ὧν; the problems, the answer to the question πρὸς ποῖα.

consideration of *what makes up the method* that Aristotle has assigned as his goal in the beginning of Chapter 4 starts with Chapter 13 and ends with the end of Book VII. But for him, the tools are part of a general art of discovery; the places, of a special art of discovery (*In Top.* 351; 353). Like the others, Maurus subdivides that part of the method devoted to discovery and preceding the consideration of the disposition, and he uses the same word as Pacius (*invenire*) to express the object of the second step, which he describes, as does Pacius, as an art for discovering dialectical reasons (*In Top.* 39#1). (It is only, however, in his commentary on Chapter 13 that it will become evident that for him too the consideration of the tools marks the beginning of the study of the way of discovering (*In Top.* 406).) In addition, for Maurus, as for the other commentators, the two expressions by which Aristotle describes the first step designate the propositions and the problems respectively.

The division of the essential of the method or of discovery is less uniform among the Moderns. For example, Forster puts Chapters 4 to 10 together, as did the Ancients, under the title 'Subjects and Materials of Discussion'; and Chapter 13 through Book VII, Chapter 5, under the title 'The Provision of Arguments'. Pickard Cambridge does likewise. Brunschwig, however, puts under the heading 'Éléments constitutifs de la méthode dialectique' Chapters 4 to 18 of Book I and calls '*Topique* proprement dite' Books II to VII, omitting to divide, as we do, Aristotle's consideration of the parts of the dialectical argument against that of the means for procuring an abundance of arguments. Brunschwig thus ends up dividing the tools against the places before even having grouped them. Now, since there are few running commentaries on the *Topics* among the Moderns, we have less indication than we have for the Ancients that they might have seen clearly a division of the means of abundance. Pelletier does, however:

Il faut donc maintenant aborder l'examen des sources heuristiques et chercher comment Aristote rend compte de l'efficacité du dialecticien à découvrir ses principes d'attaque. Par quelles opérations, par quels moyens spontanés ou méthodiques, à son avis, le dialecticien s'assure-t-il de ne jamais être pris de court dans la discussion du moins tant que la position suggérée se prête à quelque attaque? Comment se découvre une attaque? Comment maintient-on une attaque abondante contre toute position? À quoi discerner aisément les endoxes pertinents à tout problème proposé? Aristote a cru répondre adéquatement à ces questions et régler suffisamment les efforts du dialecticien en lui fournissant des ὄργανα et des τόποι. C'est d'ailleurs à indiquer que telle est leur fonction que se résume ce qu'il dit de général sur les instruments et les lieux. Tout ce qu'il ajoute à cette définition par l'utilité concerne tel instrument ou tel lieu particuliers. Ainsi dit-il, comme première et dernière phrase du traité de l'instrument, que celui-ci assure l'abondance des arguments. (1991, 252-253)

And if Waitz is not very clear about Chapter 4 of Book I starting a special step, he is so in respect to what starts Chapter 13:

Ad quae potissimum capita respiciendum sit, ut syllogismi in disputando nobis suppedient, exponitur. (449)

Furthermore, we see that he does make the distinction between tools and places for having arguments in quantity:

De locis, unde petenda sint argumenta ex quibus evincas quod velis (...), egit lib. II-VII. (Waitz 1846, 511)

At the end of Chapter 9, Aristotle has a conclusion that recalls what he proposed at the start of Chapter 4:

ὥστε περὶ ὧν μὲν οἱ λόγοι καὶ ἐξ ὧν, ταῦτα καὶ τοσαῦτά ἐστι· πῶς δὲ ληψόμεθα καὶ δι' ὧν εὐπορήσομεν, μετὰ ταῦτα λεκτέον. (*Top.* I 9.103b39-a2)³⁵

But here he appears to be dividing more explicitly the act of discovery into *ways of seizing [the premises]* (πῶς δὲ ληψόμεθα: the tools) and *means for abounding [in arguments]* (δι' ὧν εὐπορήσομεν: the places).³⁶

Here also it is clear that Alexander considers the tools as means for having an abundance. They serve for obtaining dialectical premises, he says, which in turn serve for dialectical arguments (*In Top.* 68.2-9). Now we can understand especially that according to him, the step devoted to the discovery of the arguments begins with Chapter 13, but that Chapters 10-12 are presupposed to it. In words that recall those of Aristotle in *Metaphysics* Beta, Alexander, at the beginning of his commentary to Chapter 10, explains in fact that since it is necessary to know the things for whose discovery one is seeking a method, it is necessary to know the nature of the premises that one has to get and the problems to be inquired into (68.9-13). And in Chapter 12, he explains the necessity of distinguishing the kinds of dialectical reasoning by the same reason; it is for them that the tools that we are about to study will be useful (85.26-28).

³⁵ 'These, then, are the number and variety of things arguments are about and are made from. How we are to obtain them, and the means by which we are to be equipped to deal with them, must be explained next.' Smith translation

³⁶ Brunschwig 1967, 14n2, who sees a close connection between the verb *lambanein* and the premise—we shall come back to this—has another interpretation. According to him, with πῶς δὲ ληψόμεθα, Aristotle is announcing Chapter 10, devoted to the dialectical premise, rather than the considerations of the tools in Chapters 13-18. These latter considerations are announced, according to Brunschwig, with the words δι' ὧν εὐπορήσομεν.

Starting with his commentary to the end of Chapter 9, it becomes evident that Albert considers that the second step announced in Chapter 4 will begin with the tools and, therefore, that they too are means for having an abundance. Also, we can then understand that he thinks it is necessary to have seen beforehand from what complex objects and about which of them dialectical arguments will proceed. As a matter of fact, up to now we have only seen the simple ones from which and about which they will proceed:

Unde cum non sint nisi decem praedicamenta, et in omnibus istis ista quatuor sunt praedicata, et non plura: patet quod omnia de quibus (hoc est, ad quae) et ex quibus materialibus et integralibus simplicibus principiis sunt disputationes sive argumentationes dialecticae, haec et tanta sunt dicta (...) Quomodo autem sumemus ea ex quibus ut complexis est methodus, et quomodo faciemus ea in communi per quae facile poterimus habere methodum, post haec deinceps dicendum. Per quae autem facile poterimus habere methodum, infra docebimus quando dicemus instrumenta hujusmodi syllogismi dialectici. (Albert, *In Top.* 265b)

Chapters 10-11 are therefore, for Albert as for Alexander, presupposed for the study of the tools, because parts of the study of the composition of arguments. But Albert explains more clearly the difference between the considerations of Chapters 4-9 and those of Chapters 10-11 by a distinction between remote integral parts and proximate ones, as we also do. Also, it is by the distinction between integral and subjective parts that he explains the difference between what is said in Chapters 4-11 and in Chapter 12:

Habitis autem jam principiis incomplexis et complexis integralibus ratiocinationis dialecticae, nunc determinandum est de partibus ejus subjectivis, in quas ut in species dividitur ratiocinatio dialectica. Determinatis enim his quae ut complexa et incomplexa integrando constituunt ratiocinationem dialecticam, oportet determinare quot et quae dialecticarum ratiocinationum sunt species. (Albert, *In Top.* 273a)

For Pacius as for Albert, Chapters 10 and 11 are there to complete the study of the material that Aristotle took up in Chapters 4-9, and are presupposed to the study of discovery that starts in Chapter 13. There Aristotle is still considering the matter of the arguments, but as *composed* in the proposition and the problem. That is indeed how Pacius concludes his explanations of Chapter 9:

Concludit se exposuisse id quod proposuit initio cap. 4 id est materiam disputationum dialecticarum, unde ait explicandum relinqui, quomodo illius materiae ac disputationum copiam habere possimus. (*In Top.* 357#4)

And he begins Chapter 10:

Hactenus generaliter exposuit rationum et disputationum dialecticarum materiam, id est, quatuor illa attributa, et decem categorias, ex quibus

propositiones et problemata consiciuntur: deinceps utens ordine compositivo, agit in hoc capite de propositionibus, et in sequentibus cap. de problematibus. (Pacius, *In Top.* 357)

As for Maurus, just like Albert and Pacius, he sees the difference between remote integral parts and proximate ones as explaining the difference in the considerations of Chapters 4-9 and of 10-11 (*In Top.* 402#1). And, like them, for Maurus it is the difference between integral and subjective parts which explains the difference in the considerations of Chapters 4-11 and 12 (405; 391-392#13).

Now we are going to examine Smith's position in respect to the division of the discovery and of the means for abundance. He has come to the same conclusion as I have, holding that the essential of the method or the discovery involves two parts:

101b11-16 [chap. 4]. "what our method consists of": as the close echoes of this sentence in 103b39-104a2 [chap. 9] show, there are two parts to this method. The first is a matter of classifying "what arguments are about" and "what arguments are made from"; Aristotle says at the end of I.9 that he has accomplished this task. The next part of the task is to give the means through which we may be 'equipped to deal with these'. (Smith 1997, 56)

But whereas I place the beginning of the second part with Chapter 13, Smith believes it starts with Chapter 10. I think this is partly because he does not distinguish, as I do, between the remote parts and subjects (predicables) and the immediate parts and subjects (premises and problems) of the arguments. If he made the distinction, in fact, he would see that the dialectical premises and problems must be considered parts of what 'classify what arguments are about and what arguments are made from'. Moreover, Smith doesn't take account here, nor offer any explanation of the fact that these sentences of Chapter 9 by which he says Aristotle finishes the first step and which announce the beginning of the second are more or less repeated at the beginning of Chapter 13³⁷:

103b39-104a2 [chap. 9]. At 101b11-13 [chap. 4] Aristotle said that it would be sufficient for his purposes to explain what arguments are about, what they are made of, and how we may be equipped to deal with them. As these lines note, I.4-9 accomplish the first two of these tasks (by giving a system for classifying premisses and problems). It remains to say how we are to be "equipped to deal" with these. Some interpreters suppose that the "means by which" is the four "instruments" Aristotle discusses in I.13-18 (cf. 108b32, which refers retrospectively to "the tools by means of which deductions come about"). In that case, we should expect I.10-12 to explain

³⁷ τὰ μὲν οὖν γένη περὶ ὧν τε οἱ λόγοι καὶ ἐξ ὧν κατάπερ ἔμποσθεν εἴρηται διωρίσθω (*Top.* I 13.105a20-21).

“how we are to obtain” something, but that is not what we find. Brunschwig nevertheless sees a reference to premisses in the verb “obtain” [see *Top.* I, 9, 104a1-2 and Smith translation, p. 8] and supposes that Aristotle is referring to the discussion of premisses in I.10. A better solution, I think, is suggested by the end of Book VII: “The locations, then, by means of which we shall be equipped to deal with each of the problems have been enumerated with reasonable adequacy.” It is therefore the contents of Books II-VII that give “the means by which” we have an argumentative facility. But those contents are in turn useful only if we understand what premisses and problems are (I.10-11), and Aristotle says that the four “tools” are themselves to be used in connection with these locations (108b33). Aristotle is referring here, then, to everything that follows through the end of Book VII. (Smith 1997, 77)

Thus, not only does Smith think that the second part of the method starts in Chapter 10, but that Chapters 10-12 are there because the knowledge of the nature of the premises and problems is necessary for investigating the means for abundance of arguments, which for him are only the places, and Chapters 13-18 are there because they are presupposed to the places.

Now, given the statement in 18.108b32 (τὰ μὲν οὖν ὄργανα δι’ ὧν οἱ συλλογισμοὶ ταῦτ’ ἐστίν³⁸) which refers retrospectively to the tools, objects of Chapters 13-18, and given the sentence with which Aristotle begins his consideration of the tools in 13, 105a21-22 (τὰ δ’ ὄργανα δι’ ὧν εὐπορήσομεν τῶν συλλογισμῶν ἐστὶ τέτταρα³⁹), to assert that the means for abounding in arguments are only the places is a strange position. We could also add as an argument Aristotle’s consideration of the usefulness of the tools in Chapter 18. Indeed, even if they are used in conjunction with the places, it is clear that they are still tools for getting dialectical arguments.

It is true that the knowledge of the nature of the premises and problems is necessary for investigating the means for abundance of arguments. But Smith neglected two things. Not only is the definition of dialectical premise and problem necessary for understanding the distinction of the places in Books II-VII, but the distinction of dialectical arguments (Chapter 12), and the earlier distinction of definition, property, genus and accident also are. And these three distinctions are not only necessary for understanding the places, but also for seeing why the four tools are useful.

³⁸ ‘These, then, are the tools by means of which syllogisms come about’

³⁹ ‘The tools by means of which we will abound in syllogisms are four’

Indeed, if one did not know that induction is a dialectical argument, for example, one would not see one reason why the tool of likeness is useful. If one did not see the importance of the problem of definition and the connected importance of same and other, one would not understand why the third and fourth tools are so useful in dialectic because they are both useful in defining, and the third tool in seeing same and other. And if one did not know what a dialectical premise was, one could hardly understand the tool's necessity and usefulness for abounding in dialectical arguments. So Chapters 4 through 12 are necessary to see the usefulness of both the tools and the places. Nonetheless, Smith mentions only the usefulness of Chapters 10 and 11 and he does so solely in view of the places.

At the beginning of Chapter 13, Aristotle recalls what he had already done (in the first sentence 105a20-21) and what he is about to consider in the rest of Book I (in the beginning of the second sentence 105a21-22). Although Aristotle does not make explicit the distinction between remote and proximate parts in saying what he has done, the juxtaposition of these two sentences here clearly lends authority to the reason given above for dividing Chapters 4-12 against Chapters 13-18 rather than dividing Chapters 4-9 against what comes after in Book I.

That Smith seems to think that the means for abundance of arguments are only the places explains to some extent his way of dividing the book. Thinking the consideration of the four tools is not yet a consideration of part of how we can abound in dialectical arguments, he does not at least see the same significance in dividing Chapters 13-18 against Chapters 4-9, which he thinks covers the whole first step described by Aristotle. Whence he divides 4-9 against Book II and what follows, while still trying to find reasons to attach to this last member Chapters 10 to 18.

But Aristotle's words at the end of Book VII (155a37-38) only indicate that he has completed the consideration of the places through which we can abound in arguments for each problem. It does not deny what he says (at the beginning of Chapter 13, Book I) about taking up in Chapters 13-18 of Book I the tools through which we can abound in syllogisms. I therefore do not see any reason to refuse the title of 'means for abounding in arguments' to the instruments and to reserve it exclusively for the places.

Nonetheless, when he comments Chapter 13, Smith becomes less clear as to whether he considers the instruments that he said were presupposed by the places, which are the means of being equipped with deductions, being themselves such means. Indeed, he gives the impression that he considers the tools themselves to be means:

105a21-33 [chap. 13]. At I.4, 101b11-13, Aristotle said that an adequate account of his dialectical “procedure” would state “the number and kinds of things that arguments are about, and what they are made of, and how we are to be supplied with these”. He now turns to the last component of this, enumerating four “tools” (*organa*) by means of which we are to be equipped with deductions. (...) One thing missing from this list, and indeed not mentioned at all until the very last sentence of Book I, is the “locations” or “places” (*topoi*) which have given the *Topics* its name. (Smith 1997, 87)

The explanation that he then gives of place and of its relation to tool also gives the impression that he considers the tools to be means for abundance of arguments:

Aristotle’s dialectical art is to be a procedure for finding premisses that meet two requirements: (i) they will be conceded by our opponent and (ii) they will imply the conclusion we want to establish. To meet (i), we need to know what sorts of things our opponent will accept, whereas to meet (ii), we need to know what follows from what. A solution to the problem would result if we had a double system for classifying propositions: first as lists of opinions of different sorts of people, next as possible premisses for deriving a given conclusion. Aristotle’s method, as I reconstruct it, rests on just such a system of classification. First, he tells us in I. 14 that we should compile lists of the opinions of various kinds of person. Next, in Books II-VI of the *Topics*, he gives us “locations” (*topoi*) which consist of recipes for constructing arguments for various conclusions. (...) To use the method, we first determine our conclusion (which is simply the denial of the answerer’s thesis). Then, using the collection of *topoi*, we find some premisses from which it would follow. Finally, we search for those premisses among the relevant collection of opinions. Once we have found them, all that remains is to present them to our opponent in an appropriate manner as questions (cf. VIII. i, 1555b4-7). (Smith 1997, 88)

And this is how Smith begins the section on the places in his Introduction:

These collections of endoxa will be useful for telling us whether our opponent will accept any given premiss, but they will not of themselves tell us which premisses to put forward. This is the job of a second component of the dialectical art, one that is far more significant for the history of philosophy and logic. (Smith 1997, xxiv)

Should we or should we not conclude that the tools are for Smith, along with the places, means for abounding in arguments? This doesn’t seem clear to me yet. After having explained his two ways of describing a place, Smith says:

These locations and their uses are not yet the whole of Aristotle’s dialectical method, since they only yield potentially useful premisses. To determine if they are actually useful, i.e. whether the answerer will assent to them, we shall next have to consult the relevant inventory of premisses. And if our premisses survive this test, we shall then need to couch them in appropriate language and order them for presentation according to a good strategy. (Smith 1997, xxviii)

It seems therefore that sometimes Smith's conception of dialectic makes of the tools a means for abounding in arguments, along with the places. Other, less recent writings, increase this impression:

I believe it is enough to show how the combination of *topoi* and collections of *endoxa*, indexed in appropriate ways, would provide a method for success in dialectical argument generally. (Smith 1993, 349)

Must one understand that the tools also serve for arguments?

in any sort of dialectical argument, the questioner must construct an argument out of the answerer's responses. Success in this endeavor requires that the questioner put forward premises which satisfy two criteria: (1) the answerer must accept them, and (2) they must actually imply the desired conclusion. I think Aristotle gives a method in the *Topics* for doing just this. In outline, the method rests on two different systems for classifying premises. First, we are to assemble collections of premises which various types of person believe (...) The construction of these inventories of *endoxa* comprises the first component of Aristotle's art. Its second component consists of the *topoi*, "locations", from which the treatise takes its name, (...) But the method does not consist only of *topoi*, for it is not enough simply to obtain useful premises. We must also obtain useful premises which our opponent will concede. That would be handled in turn by having available the inventories of *endoxa*, memorized and filed under the various subject headings. (Smith 1994, 145-146)

This passage here where he speaks about the first component of the art seems to indicate that Smith thinks that the instruments constitute one of the ways for abounding in arguments. But perhaps he is only speaking about the part of the art which he elsewhere says is devoted to how arguments are made and what they are about.

Finally, I think that it is not clear in which part of the method (that from which and about which the arguments are made, and the ways to abound in arguments) Smith situates the tools.

To conclude, I will give the division of the *Topics* schematically according as I have presented it. This division has the advantage of allowing us to see an order. The reason the proemium comes before the treatise is obvious. As to the division of the treatise, it is natural to see what is essential to the method of discovery before what is more accessory. Now, why is there such an order between the two parts of what is essential to the method? The distinction of the parts of dialectical argument is necessary for understanding the distinction and usefulness of the tools and places. Now, we generally distinguish composing parts before subject parts. Finally, Albert seems to touch upon the reason for the tools before the places when he distinguishes universal methods:

Dicitur tamen methodus universalis tripliciter. Et quoad ea de quibus est: et sic methodus quae est ad omnia, dicitur universalis, et sic methodus istius primi libri universalis est methodus. (*In Top.* 260b)

DIVISION AND SUBDIVISIONS OF THE TOPICS

PROEMIUM: Book I, Chapters 1-3

THE PURPOSE OF THE WORK: BOOK ONE, CHAPTER 1

FOR WHAT AND HOW MANY THINGS THE BOOK IS USEFUL: BOOK ONE, CHAPTER II

WHEN WE POSSESS THIS METHOD SUFFICIENTLY: BOOK ONE, CHAPTER 3

TREATISE: Book I, Chapter 4 through Book VIII

THE SUBSTANCE OF THE METHOD (DISCOVERY): BOOK I, CHAPTER 4 THROUGH BOOK VII

Distinction of the parts of dialectical argument: Book I, Chapters 4-12

The composing parts: Chapters 4-11

The remote parts (the four predicates): Chapters 4-9

The proximate parts (dialectical premise and problem): Chapters 10-11

The subject parts (syllogism and induction): Chapter 12

How we can abound in these parts and arguments: Book I, Chapter 13 through Book VII

The four tools: Book I, Chapters 13-18

The description of the four tools: Chapter 13-17

The special usefulness of the last three tools: Chapter 18

The places for which the four tools are useful: Books II through VII

USING THE METHOD IN CONVERSATION WITH ANOTHER (DISPOSITION): BOOK VIII

CHAPTER TWO

ARISTOTLE'S PROEMIUM TO THE TOPICS

The whole of Book I is unanimously considered to be Aristotle's general introduction to his conception of dialectical method. Thus, a certain familiarity with it is necessary for whomever sets out to study one of its fundamental elements. Chapters 1 to 3 contain, among other things, an explanation of the nature of the dialectical syllogism and its premises, as well as the goals of dialectic. We will see that the tools serve for getting such premises and syllogisms, and we will study the use that Aristotle makes of them with a view to reaching one of these goals; for these reasons among others, these chapters are especially necessary for the investigation we are about to undertake.

THE PURPOSE OF THE WORK (CHAPTER 1)

Aristotle undertakes this treatise by saying:

Ἡ μὲν πρόθεσις τῆς πραγματείας μέθοδον εὑρεῖν, ἀφ' ἧς δυνασόμεθα συλλογίζεσθαι περὶ παντὸς τοῦ προτεθέντος προβλήματος ἐξ ἐνδόξων, καὶ αὐτοὶ λόγον ὑπέχοντες μὴθὲν ἐροῦμεν ὑπεναντίον. (*Top.* I 1.100a18-21)

'The purpose of this treatise is to find a *methodos*¹ from which we will be able to *sylogize* from *probable opinions* about every problem proposed and ourselves, upholding a position, will say nothing contrary.' The two parts of this sentence correspond to the two roles that the interlocutors in the dialogue naturally assume in turn: the first, the role of the questioner; the second, that of the respondent.² 'To say nothing contrary' is also the only indication furnished by the proemium of the *Topics* that the *Sophistical Refutations* is its Ninth Book, whereas it is clear, as was stated, that the *Prior Analytics* bears equally on demonstration, the subject of the *Posterior Analytics*. Having his interlocutor contradict himself is indeed the principal goal of the sophist.³

Alexander notes something that Aristotle himself already clearly affirms,⁴ that it is in view of understanding his proposal better that the Stagirite then defines the syllogism as a 'discourse (or speech), in which some things being laid down, something else follows necessarily because of those things laid down',⁵ and then distinguishes four species of it: demonstration (ἀπόδειξις), dialectical syllogism (διαλεκτικὸς συλλογισμὸς), eristic syllogism (ἐριστικὸς συλλογισμὸς) and paralogism (παραλογισμὸς). The fact that the dialectical syllogism is not called by a special word, whereas the demonstrative

¹ The word μέθοδος comes from μετά (along or according to) and from ὁδός (road). In one sense, it means a kind of knowledge which follows a road or a determinate order, especially the demonstrative one, and in another, this road or order itself. Often, Aristotle uses μέθοδος and ἐπιστήμη in the same sense, in the *Physics*, for example, and at the beginning of the *Parts of Animals*, where it is a question of two ways of having the habit of science or of *methodos*. The second way, which Aristotle refers to as *paideia*, is the knowledge of the method in the sense of the road to be followed. In the *Topics*, it is a question of a kind of knowledge which follows a determinate order and which is about an order. Indeed it is only for logic that we find the two senses. For it is concerned with a science which has for its object an order.

² See Smith 1997, 42.

³ See *Soph. el.* 3.165b18.

⁴ Εἰπὼν ὅτι ἐστὶν ἡ πρόθεσις περὶ παντὸς τοῦ προτεθέντος προβλήματος δι' ἐνδόξων συλλογίζεσθαι, εἰκότως πρῶτον, τί ἐστὶ συλλογισμὸς, λέγει. ἔπειτα τὰς διαφορὰς τῶν συλλογισμῶν ἐρεῖ, ἵνα ὁποῖός τις ἐστὶν ὁ διαλεκτικὸς συλλογισμὸς ὁ δι' ἐνδόξων γινόμενος, περὶ οὗ νῦν πραγματευόμεθα, καὶ τίνι τῶν ἄλλων διαφέρει, φανερὸν γένηται (Alexander, *In Top.* 7.4-8). See also 15.15-20. πρῶτον οὖν ῥητέον τί ἐστὶ συλλογισμὸς καὶ τίνες αὐτοῦ διαφοραί, ὅπως ληφθῆ ὁ διαλεκτικὸς συλλογισμὸς· τοῦτον γὰρ ζητοῦμεν κατὰ τὴν προκειμένην πραγματείαν (*Top.* I 1.100a21-24).

⁵ Ἔστι δὲ συλλογισμὸς λόγος ἐν ᾧ τεθέντων τινῶν ἕτερόν τι τῶν κειμένων ἐξ ἀνάγκης συμβαίνει διὰ τῶν κειμένων (*Top.* I 1.100a25-27).

sylllogism receives the name 'demonstration' is a sign of its lesser perfection. It is in fact a mark of analogical naming that sometimes one of the things receives a special name because of its excellence.⁶

Aristotle briefly defines demonstration and dialectical syllogism, the first as a syllogism which proceeds from first and true premises, or which follow from such; and the second, from probable premises. He then describes the true and first premises and gives in a way the definition of the probable proposition of the *Topics*:

ἀπόδειξις μὲν οὖν ἐστίν, ὅταν ἐξ ἀληθῶν καὶ πρώτων ὁ συλλογισμὸς ᾗ, ἢ ἐκ τοιούτων ἃ διὰ τινων πρώτων καὶ ἀληθῶν τῆς περὶ αὐτὰ γνώσεως τὴν ἀρχὴν εἴληφεν, διαλεκτικὸς δὲ συλλογισμὸς ὁ ἐξ ἐνδόξων συλλογιζόμενος. ἔστι δὲ ἀληθῆ μὲν καὶ πρώτα τὰ μὴ δι' ἑτέρων ἀλλὰ δι' αὐτῶν ἔχοντα τὴν πίστιν (...) ἔνδοξα δὲ τὰ δοκοῦντα πᾶσιν ἢ τοῖς πλείστοις ἢ τοῖς σοφοῖς, καὶ τούτοις ἢ πᾶσιν ἢ τοῖς πλείστοις ἢ τοῖς μάλιστα γνωρίμοις καὶ ἐνδόξοις. (*Top.* I 1.100a27-b23)⁷

He then describes the two kinds of eristic syllogism, by the form and by the matter, and indicates that the word 'syllogism' designating the first must be qualified, since the thing designated by this word does not respect its comprehension, whereas the sophism of matter can be said to be a 'syllogism'. Aristotle ends with what he calls 'paralogism' and 'pseudograph'.

Although it would not be possible to furnish a complete answer in just a few pages, some rather controversial questions do merit being considered here because of their fundamental nature, and because, since they are about dialectic in general, we will not have the occasion to come back to them later. One of these is the translation of συλλογίζεσθαι (100a2) and the current opinion concerning the presence in the *Topics* of what this term

⁶ In addition to being called 'science' along with mathematics and natural philosophy, metaphysics, the science of being as being, is also called 'wisdom'.

⁷ See Alexander, *In Top.* 19.22-27: διαφέρει δὲ τὸ ἐνδοξὸν τοῦ ἀληθοῦς οὐ τῷ ψευδὲς εἶναι (ἔστι γὰρ τινα ἔνδοξα καὶ ἀληθῆ) ἀλλὰ τῇ ἐπικρίσει. ἔστι γὰρ τῷ μὲν ἀληθεῖ ἀπὸ τοῦ πράγματος, περὶ οὗ ἐστίν, ἢ ἐπικρίσις· ὅταν γὰρ τοῦτο αὐτῷ ὁμολογῆ, τότε ἐστὶν ἀληθές· τῷ δὲ ἐνδόξῳ οὐκ ἀπὸ τῶν πραγμάτων ἢ ἐπικρίσις ἀλλ' ἀπὸ τῶν ἀκουόντων καὶ τῶν τούτων ὑπολήψεων, ἃς ἔχουσι περὶ τῶν πραγμάτων.

designates; another is the translation of ἐνδόξων (100a3) and the identification of the essential characteristic of the dialectical syllogism. As we said, Aristotle defines the συλλογισμός as ‘a discourse in which, certain things having been laid down, something different from those results of necessity because of those things laid down’ (*Top.* I 1.100a25-27). He defines it in essentially the same terms in *Prior Analytics* I 1 24a18-20b; *Sophistical Refutations* 1.164b27-165a2; and *Rhetoric* I 2.1356b16-18.

Now, according to many interpreters, although Aristotle uses the Greek word συλλογισμός, the English word ‘syllogism’, which is its historical descendant, is a bad translation for it. Many therefore translate by ‘deduction’, following Corcoran.⁸ One reason given is that ‘syllogism’ or ‘categorical syllogism’ is normally used in what modern logicians call a narrow sense to mean one of the specific three forms or figures Aristotle discusses in the *Prior Analytics* I 1-6, while these same logicians consider that his definition of συλλογισμός comprehends a much wider class: pretty much anything that they consider to be ‘valid argument’. Indeed, from the standpoint of modern logical theory, that any argument respecting this process that Aristotle calls ‘to syllogise’ can be transformed into an argument using only those deductive forms nowadays called ‘syllogism’ is false.⁹ Another

⁸ See Smith 1989, 106; 1994, 135.

⁹ See Brunschwig 1967, 113n2; xxx-xxxiv; Smith 1995, 29; 1997, xxii, 42; 1994, 133-135: ‘Whether it is a συλλογισμός depends only on the purely logical question whether its conclusion follows from its premises. In the same way, whether an argument is dialectical depends on the extra-logical question whether its premises are ἐνδοξα. Accordingly, we may separate the question “Is this argument a συλλογισμός?” from the questions “Is this argument a demonstration?” and “Is this argument a dialectical συλλογισμός?” and make it the object of a more general study, the theory of συλλογισμοί. A theory of what follows from what, abstracted from considerations of content, can tolerably well be called a logical theory. Aristotle gives us just such a theory in *Prior Analytics* i 1-22. Now, the long tradition of Aristotelian interpretation from antiquity forward universally supposed that this theory (often called “the syllogistic”) is the underlying logical theory presupposed by both the *Topics* and the *Posterior Analytics* (which is why those treatises follow the *Prior Analytics* in the ordering of the *Organon*). In the present century, however, attention has been focused on a troublesome detail. Despite the highly general nature of Aristotle’s definition of συλλογισμός, the range of arguments actually considered in the *Prior Analytics* is relatively narrow. They must consist only of categorical sentences, as they are traditionally called: sentences having one of the four forms “Every/No/Not every /Some F is a G”, without any propositional connectives, many-place predicates, or other logical devices as we have come to understand them since Frege and Russell. Aristotle’s account of validity appears to be complete if we restrict ourselves to this limited language, but it is hardly adequate by our standards as a theory of validity in general since it is not even capable of expressing the propositional calculus. Accordingly, we must ask: did Aristotle think that he was giving an account of validity in general (so that συλλογισμός means “valid argument”), or did he intend only to give an account of validity for what he knew to be a limited class of arguments (so that συλλογισμός means, or comes to mean “categorical syllogism”)? There is no mistaking Aristotle’s view. He says quite clearly in the *Prior Analytics* (i 23, 40b17-22, i 29, 45b36-46a2, ii 23, 68b8-14) that the theory he develops in that work is the theory of inference, giving all the possible valid argument forms for all types of argument whatsoever.’

reason, brought forth by Smith 1995, 47 is that, 'if we translate *sullogismos* as 'syllogism', we render it [Aristotle's thesis] true but trivial: "Every syllogism is a syllogism"'.

Now, to translate by 'deduction' because one thinks that modern logic has shown that there exist other ways to syllogize than the three figures of the categorical syllogism and 'to get to something different with necessity from what was laid down because of what was laid down'; or again because one adheres to the reason mentioned by Smith; in any case, this would no longer be a translation, but an interpretation.

In the first case one cannot even use a concern for internal coherence and the need to understand what the author supposedly wanted to say as an argument; this is a matter of an historical reading and correction of the text of Aristotle carried out in the light of what later currents of thought claimed to have established. It is better, it seems to me, to do as Slowkowski 1997 does and to keep 'syllogism', even though he sides with the view point of modern logic in stressing that it is false that every process of reason answering to what Aristotle called *συλλογισμός* can be reduced to a figured argument.¹⁰ In the other case, the motive is an interpretation that is questionable. For, nothing stops one from using the word 'syllogism' to designate both the kind of discourse defined in Chapter 1 of the *Prior Analytics* and this type of discourse considered under the aspect of the figures and moods. It is even natural to do so when one understands that the figures represent all the possible valid forms of what is defined by Aristotle as 'syllogism' in the *Prior Analytics* and the *Topics*, and that they are thus implicitly contained in this definition.

Furthermore, quite a few modern commentators are of the opinion that there are not even any syllogisms in the *Topics*, that is, any 'classic' syllogism in the strict sense in which it is presented in the *Prior Analytics*, with the figures and moods. One could only find what could be called a 'syllogism' in the general sense, and this is to be explained by the prior composition of the *Topics* in relation to the discovery of the figured syllogism, the theory of which is only expounded in the *Prior Analytics*.¹¹

¹⁰ See 15n31 and 25-26: 'The definition of the syllogism is a very broad one: all it says is that from some premisses something else, namely the conclusion necessarily follows and it follows due to the premisses alone. The definition is of course broader than the categorical syllogism with which the *Prior Analytics* mainly deals and to which the word "syllogism" in English most frequently refers.' This is true in a way, of course, since the definition applies only in an extended way to the hypothetical and disjunctive syllogisms. But this is not all that these authors mean.

¹¹ See Brunschwig 1967, xxx-xxx1; 1989, 488; Smith 1997, xxxiv; 1994, 136; 142.

I hold the position of what Smith calls ‘the traditional view’, according to which there is a single account of ‘valid inference’ contained in the *Prior Analytics* that underlies both dialectical and demonstrative arguments. This lasted, says Smith, up to the evolutionist explanations of Jaeger and Solmsen, and one can find a nice illustration of it at the beginning of Alexander’s commentary on the *Topics*, 1.19-3.8. Certain contemporary commentators have also retained this interpretation.¹² As it would be impossible to defend this opinion in any adequate way within the framework of this dissertation, I will only note that although Smith does give a fairly accurate account of the ‘traditional view’, he does commit a rather serious error. This is what he says:

If we accept this view [the traditional one] and the definition of dialectic as “argument from *endoxa*”, then an account of dialectic could add nothing to the theory of inference itself; all that would be proper to it would be a study of which premises are *endoxa*. (Smith 1993, 337)

Now, those who hold the view that Smith is commenting on do not claim that the only innovation in the *Topics* is to be found in the description of the *endoxa* nor that it is exactly the same form that is to be found in both demonstrative and dialectical reasoning. The ‘traditionalists’ are not claiming that the only difference between demonstration and dialectical argument is the matter. This is the obvious and principal difference, but it is also the case that different kinds of matter call for different forms (hypothetical syllogisms, inductions, for example) and even for supplemental forms, which are provided by the places, since lacking the kind of definition that is needed for demonstration, something must take its place in dialectical syllogizing. It does not mean that the dialectical syllogism does not need to respect the rules set up in the *Prior Analytics*.

To his translation of ἐνδόξων in the πρόθεσις (100a20) and in 100a39 by ‘idées admises’, Brunschwig adds a note:

Il faut souligner que le caractère “endoxal” d’une opinion ou d’une idée n’est pas, en son principe, une propriété qui lui appartient *de droit*, en vertu de son contenu intrinsèque (ce qui interdit les traductions par probable, vraisemblable, plausible, et autres adjectifs comportant un suffixe analogue), mais une propriété qui lui appartient *de fait* : comme le précisera la définition donnée en 100b21-23 (cf. aussi 104a8-37), les énoncés “endoxaux” sont ceux qui ont des garants réels, qui sont autorisés ou accrédités par l’adhésion effective. (Brunschwig 1967, 1n3.)

¹² See Grimaldi 1972, 84n5; Berti 1970, 37; Pelletier 1991, 260-6.

Brunschwig is correct in saying that to be 'endoxal' is a characteristic that a statement has *de facto*. Whence, his translation by 'idée admise' is, strictly speaking, closer to the Greek and in this sense better than the 'probable' of the Latin tradition. The latter designates an objective, intrinsic characteristic that a statement possesses *de jure*. (Something that can also be said of 'acceptable' in Smith, 1997.)¹³ And Aquinas says: 'Cum enim aliqua volumus sumere rationabiliter, idest probabiliter absque demonstratione, talia oportet ponere quae videmus esse vera in omnibus aut in multis: hoc enim est de ratione probabilis'.¹⁴ Nonetheless, the fact that Aristotle speaks about the dialectical premise in terms of a characteristic that it has *de facto* in no way means that it does not also possess it *de jure*.

To claim this would be to accuse Aristotle of arbitrarily promoting a practice of discussions which start with what others affirm. Arbitrarily, since such a method of arguing would have no utility¹⁵ if what people affirm was not at all likely to reflect the way things really are.¹⁶ Indeed, those authors who share this opinion on the nature of the *endoxal* end up with this arbitrary conception of dialectic. They claim, in fact, that the necessity of proceeding from opinions—rather than from truths—comes from the fact that the method proceeds

¹³ Smith 1997, 1 translates *Topics* I 1.100a18-20 thus: 'The goal of this study is to find a method with which we shall be able to construct deductions from acceptable premisses concerning any problem that is proposed'. And he translates 100a29-30 as follows: 'A *dialectical* deduction, on the other hand, is one which deduces from what is acceptable' (1997, 1).

¹⁴ *In de Caelo* I 22#229. Let us note that what makes something probable here is that it seems to us to be true in *things*.

¹⁵ Brunschwig 1967, xi. points this out himself: 'À en juger du moins d'après certains textes de caractère théorique, le dialogue ne semble pas être, pour Aristote, au coeur de la vocation de l'animal raisonnable; gagner l'assentiment de l'autre n'est en principe ni la fin suprême de la pensée, ni même le moyen privilégié d'atteindre cette fin; l'accord de l'interlocuteur n'est pas pour elle la condition d'un progrès, mais le risque, peut-être inévitable, d'un freinage. En se mettant en situation de dialogue, l'esprit substitue la juridiction des hommes à la juridiction des choses, la question "que t'en semble?" à la question "Qu'en est-il". En sollicitant l'approbation d'autrui, il s'est mis en posture de ne rien pouvoir faire sans l'avoir obtenue; le oui et le non n'ont désormais plus pour lui le sens du vrai et du faux, mais celui de l'accepté et du refusé. Il est entré dans le règne hétéronome de l'opinion.' There is, therefore, nothing exceptional in the fact that for him the object of dialectic should be to, 'doter d'une méthode sûre une activité jusqu'alors abandonnée à l'inspiration ou à la routine', 'un jeu' to understand the rules of which, 'il faut avoir vécu dans un milieu où l'on ait l'occasion d'y jouer, et nourrir le désir de s'y perfectionner', and that dialectic runs the risk 'de nos jours d'apparaître comme un art de gagner à un jeu que personne ne joue plus' (Brunschwig 1967, p. ix). But, what forces Brunschwig to conclude to the quasi uselessness and out-of-datedness of the dialogical nature of dialectic, is precisely that he thinks that 'le oui et le non n'ont désormais plus pour le répondeur le sens du vrai et du faux'. But nothing prevents us from believing that Aristotle did, in fact, think that the yes or no were at least signs of the true and the false.

¹⁶ 'If we could discover the true by ourselves, would we have the least care about human opinions?' *Phdr.* 274c.

essentially and without any justification, from the affirmations of others (people habitually say what they think, but this is not always true), or, worse yet, by questions and answers.¹⁷ They thus fail to answer the question that Berti so well asked:

As to the fact that dialectic moves not from true and first premises, as does demonstration, but from premises that belong to opinion, it is not enough to simply note this, as many interpreters habitually do, but it is necessary to understand the reason for it: it is here that the real soul of dialectic resides. (1970, 38)

And they must, therefore, insist on the institutional and conventional character of this dialectical *jousting*, on the social practice of *tournaments*, in order to justify that Aristotle should have described such a method.¹⁸

¹⁷ 'Since Aristotle so regularly contrasts dialectic, which asks questions, with demonstration, which does not, we may conjecture that the province of dialectic is generally that of argument with others, through question and answer' (Smith 1993, 338) 'In its most general form, then, any argument directed at another person through question and answer could be characterized as dialectical' (Smith 1993, 342). On the passage of the *Prior Analytics* that he translates thus: 'a dialectical premise, on the other hand, is the posing of a contradiction as a question (when one is getting answers) and the taking of something apparent and accepted (when one is deducing), as was explained in the *Topics*.' (*An. pr.* I 1.24b10-12), Smith 1996, 337 says: 'Here, the fact that dialectical premises are *endoxa* is almost an afterthought, with greater stress on the fact that they are questions'. For Brunschwig too, the essential characteristic of dialectic is the interrogation: 'Lorsque Aristote parle de dialectique (...) il se réfère toujours à la pratique du dialogue raisonné, à l'art d'argumenter par questions et réponses' (1967, x).

¹⁸ See Brunschwig 1967, xxiii: 'L'entretien dialectique, en effet, n'est pas une libre conversation, ni une discussion anarchique. L'échange verbal y est pris dans un réseau de conventions et de règles, qu'il est très éclairant de concevoir sur le modèle des codes institutionnels qui règlementent la pratique d'un sport ou d'un jeu, et qui asservissent selon des lignes bien définies le déroulement concret de toute "partie" réelle ou possible. Il convient donc de donner (avec l'aide en particulier du livre VIII qui contient beaucoup d'informations directes ou indirectes sur ce point) une idée sommaire des règles fondamentales du jeu dialectique, et des conditions dans lesquelles se déroule une partie. La discussion dialectique est un jeu à deux.' See also Smith 1993, 340: 'Aristotle wrote for his society, not for ours. As a result, he sometimes takes it for granted that his audience is familiar with many things that are not familiar to us. Sometimes, his definitions reflect this (...) We can (...) get a reasonably good picture of the practice that lies behind the *Topics*. However, we cannot do this if we try to interpret Aristotle's words in *Topics* I.1 as a self-sufficient definition intended to enable us to recognize dialectical exchanges if we happened to see them for the first time. That is simply not their purpose (...) Instead, his purpose is to provide an insightful account into the nature and function of the dramatic spectacles he and his audience knew very well by acquaintance (...) One source of evidence concerning a kind of dialectical practice is *Topics* VIII, which contains a collection of rules for a type of exchange.'

I see things quite the reverse from Brunschwig.¹⁹ I think that Aristotle was describing the dialectical proposition very concretely, by the way that we recognize it, rather than by its nature. Thus, essentially, a dialectical proposition is one that has some affinity with the truth *de jure*. It is this that justifies the very existence of dialectic, i.e., of a method that argues from such statements: their tie to objective truth. But one will be able to recognize such a proposition because it is *de facto* admitted by all, by most people, by the wise, i.e., by the fact that it is *in opinion*. Subsequently, even more concretely, there is this other step: How do we recognize what is accepted? The answer is: by asking. Whence, that other description of the dialectical statement in Chapter 10 of Book I of the *Topics: an asking of the endoxal*.

Just why does a statement that is found in opinion with a certain regularity have some likelihood of being true? The reason is that this constancy is a sign of a natural relationship that it has with the intellect. For example, Aristotle says that the fact that one always uses the word 'all' to speak of at least three things is a sign that nature inclines us to see in trinity perfection and completeness.²⁰ And Aquinas comments that what can be noted as common to all comes clearly from a natural inclination.²¹ Now, as we know, Aristotle considers that the human mind has a natural inclination to the true. Aquinas expresses these fundamental Aristotelian notions in a magnificent way:

quod a pluribus dicitur, non potest totaliter falsum esse: videtur enim esse naturale quod in pluribus est; natura autem non totaliter deficit. (IaIIae q. 5 a.3 3a)

Pelletier, who has some particularly profound reflections on this subject, says:

¹⁹ 'L'autorité qui s'attache aux propositions "endoxales" est sans doute la garantie d'une vérité intrinsèque au moins probable; on sait assez la confiance qu'Aristote accorde, fût-ce sous réserve d'examen, aux représentations collectives et à la vocation naturelle de l'humanité envers le vrai. Mais s'il invoque ces garants, ce n'est pas en tant qu'ils fournissent un indice favorable à la vérité des prémisses dialectiques; celles-ci ne remplissent pas leur fonction en tant qu'elles sont probablement vraies, mais en tant qu'elles sont véritablement approuvées' (Brunschwig 1967, xxxv).

²⁰ τὰ γὰρ δύο ἄμφω μὲν λέγομεν καὶ τοὺς δύο ἀμφοτέρους, πάντας δ' οὐ λέγομεν, ἀλλὰ κατὰ τῶν τριῶν ταύτην τὴν προσηγορίαν κατὰφασιν πρῶτον. ταῦτα δ', ὡς περ εἴρηται, διὰ τὸ τὴν φύσιν αὐτὴν οὕτως ἐπάγειν ἀκολουθοῦμεν. (*Cael.* I 1.268a16-20)

²¹ *In de Caelo* I 2#13. A sign that things are understood naturally is their being common to all: 'Si ita esset animae naturalis cognitio conclusionum sicut principiorum, eadem esset sententia apud omnes de conclusionibus, sicut de principiis: quia quae sunt naturalia, sunt eadem apud omnes. Non est autem apud omnes eadem sententia de conclusionibus, sed solum de principiis' (*Cont.Gent.* II 83).

La raison, faculté la plus excellente de l'homme,²² ne sera pas (...) vaine, sans fin propre, ou inapte à l'atteindre: la nature prépare efficacement celle-ci à la connaissance de la vérité. (1991, 38)

Pelletier affirms that Aristotle sees only a natural coherence in the attraction that knowledge exercises upon us,²³ as well as in the proportion that Aristotle notes between reason and truth:

τὸ τε γὰρ ἀληθὲς καὶ τὸ ὅμοιον τῷ ἀληθεῖ τῆς αὐτῆς ἐστὶ δυνάμει ἰδεῖν, ἅμα δὲ καὶ οἱ ἄνθρωποι πρὸς τὸ ἀληθὲς πεφύκασιν ἰκανῶς καὶ τὰ πλείω τυγχάνουσι τῆς ἀληθείας (*Rh.* I 1.1355a14-16)²⁴

Nonetheless, Pelletier makes sure that this affirmation will not be misunderstood:

Il ne s'agit pas de faire dire à Aristote que les hommes atteignent toujours déterminément la connaissance de la vérité. Bien au contraire, à mesure qu'on entre en des connaissances spécialisées et distinctes, Aristote n'hésite pas à dire que l'erreur devient plus naturelle à l'homme: «Se tromper...est plus approprié aux vivants et l'âme y passe plus de temps». (*DA* III, 3, 427b1-2) Mais, à un niveau commun et encore confus, la vérité reste facile et accessible à tous, car «qui manquerait une porte»? (*Metaph.* α 1.993b5) (Pelletier 1991, 38-39)

He concludes therefore that at a certain level, Aristotle recognizes a natural affinity between human reason and the true. This kind of co-naturalness engenders the consequence that, with the reservations he introduced, reason feels spontaneously more at ease with the true which is its end, than with the false. And this is so, Pelletier maintains, even in the absence of the perfect evidence that would allow it to perfectly distinguish the one from the other.

To show that in the absence of true and certain knowledge, reason, in order to admit or refuse something in the order of principles that are not evident, takes this habitual effect that the true and the false produce in it, i.e., the ease or the repugnance that it feels, as strong signs of the true and the false, Pelletier bases himself on an analogy drawn from the co-naturalness of the will and the moral good:

²² ὁ δὲ λόγος ἡμῖν καὶ ὁ νοῦς τῆς φύσεως τέλος. *Pol.* VII, 15, 1334b15:

²³ *Metaph.* I 1.980a2: Πάντες ἄνθρωποι τοῦ εἰδέναι ὀρέγονται φύσει. *Rh.* I 11.1371a33: ἐν δὲ τῷ μανθάνειν εἰς τὸ κατὰ φύσιν καθίστασθαι.

²⁴ 'For, in fact, the true and that which resembles it come under the purview of the same faculty, and at the same time men have a sufficient natural capacity for the truth and indeed in most cases attain to it' Freese translation

C'est une conception des plus fondamentales, chez Aristote, que soient liés plaisir et bien, peine et mal. C'est pour lui, fait d'expérience irrécusable, en même temps que conséquence inéluctable de la cohérence de la nature: chaque être sensible trouve agréable de posséder le bien que commande sa nature, et de s'y conformer; et il trouve pénible toute violence opposée. Aussi Aristote qualifiera-t-il de spontanément croyable la définition du plaisir comme "accession complète et sensible à la nature existante"²⁵ et, réciproquement, l'attribution nécessaire du bien aux choses agréables. Il fera de même consister toute l'"éducation correcte" à "amener de quelque façon dès l'enfance" chacun à confirmer dans ses moeurs cette inclination naturelle à "se réjouir et s'attrister de ce dont il faut".²⁶ C'est pour cela encore que l'agrément qui accompagne son exercice fera le meilleur signe de la vertu bien ancrée en nature.²⁷ Aristote réagit semblablement en matière de connaissance. Comment reconnaître sans évidence directe, ce qui a toute chance de se conformer à la vérité des choses? À ceci que son énoncé met la raison à l'aise et lui est d'emblée sympathique; à ceci qu'il lui serait pénible de le contester et qu'elle s'en sentirait ridicule. (Pelletier 1991, 39-40)

But as he admits, Aristotle does not speak about any 'sympathy' of reason in respect to truth. Nonetheless, there are rather convincing texts in support of this way of speaking:

πρὸς τε γνῶσιν καὶ τὴν κατὰ φιλοσοφίαν φρόνησιν τὸ δύνασθαι συνορᾶν καὶ συνεωρακέναι τὰ ἀφ' ἑκατέρας συμβαίνοντα τῆς ὑποθέσεως οὐ μικρὸν ὄργανον· λοιπὸν γὰρ τούτων ὀρθῶς ἐλέσθαι θάτερον. δεῖ δὲ πρὸς τὸ τοιοῦτον ὑπάρχειν εὐφυᾶ, καὶ τοῦτ' ἔστιν ἢ κατ' ἀλήθειαν εὐφυΐα, τὸ δύνασθαι καλῶς ἐλέσθαι τὰ ληθῆς καὶ φυγεῖν τὸ ψεῦδος· ὅπερ οἱ πεφυκότες εὖ δύνανται ποιεῖν· εὖ γὰρ φιλοῦντες καὶ μισοῦντες τὸ προσφερόμενον εὖ κρίνουσι τὸ βέλτιστον. (*Top.* VIII 14.163b9-16)²⁸

Πειρατέον δὲ περὶ τούτων πάντων ζητεῖν τὴν πίστιν διὰ τῶν λόγων, μαρτυρίοις καὶ παραδείγμασι χρώμενον

²⁵ *Rh.* I 11.1369b34

²⁶ *Eth. Nic.* II 2.1104b11-13

²⁷ *Eth. Nic.* II 2.1104b4

²⁸ 'When it comes to knowledge and the wisdom that comes from philosophy, being able to discern—or already having discerned—the consequences of either assumption is no small instrument: for it remains to choose one or the other of these rightly. In order to do that, one must be naturally gifted, and this is what it is to be naturally gifted with respect to truth: to be able properly to choose the true and avoid the false. This is just what the naturally good are able to do, for it is by loving and hating in the right way whatever is presented to them that they judge well what is best.' Smith translation

τοῖς φαινομένοις. κράτιστον μὲν γὰρ πάντας ἀνθρώπους φαίνεσθαι συνομολογοῦντας τοῖς ῥηθησομένοις, εἰ δὲ μὴ, τρόπον γέ τινα πάντας. ὅπερ μεταβιβαζόμενοι ποιήσουσιν· ἔχει γὰρ ἕκαστος οἰκεῖόν τι πρὸς τὴν ἀλήθειαν, (*Eth. Eud.* I 6.1216b26-31)²⁹

πάντες γὰρ τὰ στοιχεῖα καὶ τὰς ὑπ' αὐτῶν καλουμένας ἀρχάς, καίπερ ἄνευ λόγου τιθέντες, ὅμως τὰναντία λέγουσιν, ὡσπερ ὑπ' αὐτῆς τῆς ἀληθείας ἀναγκασθέντες. (*Ph.* I 5.188b28-30)³⁰

And Aquinas gives a nice explanation of this passage:

multi philosophorum secuti sunt veritatem usque ad hoc, quod ponerent principia esse contraria. Quod quidem licet vere ponerent, non tamen quasi ab aliqua ratione moti hoc ponebant, sed sicut ab ipsa veritate coacti. Verum enim est bonum intellectus, ad quod naturaliter ordinatur: unde sicut res cognitione carentes moventur ad suos fines absque ratione, ita interdum intellectus hominis quadam naturali inclinatione tendit in veritatem, licet rationem veritatis non percipiat. (*In Phys.* I 10#79)

From this point of view, it is not the necessity for proceeding from what is accepted by many which commands the use of opinions, but the reverse; it is the necessity for proceeding from statements that are not clearly true which commands our proceeding from what others say, because this is the way to get statements that are the closest to the true, the most *like* the true.

ipsa dialectica prout est ars obviativa, ordinare debet opus suum in disputando ad alterum, cujus oportet eam quaerere consensum: eo quod ex probabilibus procedit: quae quia sunt quae videntur omnibus vel pluribus, non sine consensu respondentis accipi possunt. (Albert, *In Top.* 491b)³¹

²⁹ 'And about all these matters the endeavour must be made to seek to convince by means of rational arguments, using observed facts as evidences and examples. For the best thing would be if all mankind were seen to be in agreement with the views that will be stated, but failing that, at any rate that all should agree in some way. And this they will do if led to change their ground, for everyone has something relative to contribute to the truth' Rackham translation

³⁰ 'All thinkers posit their elements or "principles," as they call them; and, though they give no reasoned account of these "principles," nevertheless we find—as though truth itself drove them to it in spite of themselves—that they are really talking about contrasted couples.' Wicksteed and Cornford translation

³¹ Alexander also characterizes dialectic by the fact that it proceeds from opinions. See *In Top.* 26.26-28 and his proemium.

The expressions 'probable' and 'endoxal' mean, then, the same thing, except that the first designates it by its cause and the other by its effect. I will therefore use the two terms indifferently to render ἔνδοξος.

Pelletier is among the modern authors I endorse on this question. But as we have seen, others characterize dialectic by the questions and answers. And this is why, they say, it is necessary to have recourse to what others admit:

Les *Top.* veulent définir et transmettre une méthode de discussion dialectique, c'est-à-dire dialoguée, pouvant s'appliquer à tout problème quel qu'il soit, ne nécessitant aucune compétence dans le domaine spécifique de connaissance dont peut relever le problème posé, et prenant appui sur des prémisses qui sont demandées au partenaire du dialogue et explicitement acceptées par lui; ce qui explique leur caractère essentiel, qui est de représenter des opinions généralement admises, ou faisant autorité d'une manière ou d'une autre (ἔνδοξα). (Brunschwig 1989, 500)

In its form, then, a dialectical argument differs from other kinds of argument in that its premisses are put forward as questions. But this form also entails further characteristics, since the questioner can only use as a premiss that which the answerer has conceded. (Smith 1997, xiii)³²

Consequently, for them, it is this necessity of proceeding from the endoxal or from what is admitted that implies one proceeds from opinions, from what certain people think (rather than from what is true):

I would propose, then, as a definition of dialectical argument in its most general sense, argument directed at another person which proceeds by asking questions. Now, people are generally likely to answer in accordance with what they believe; therefore, dialectical argument can be described as based on the opinions of the person at whom it is directed. (Smith 1995, 60)³³

For Smith, the agreement of the other person and the identification of the endoxal are therefore not means for obtaining what is probable objectively, it is the goal. Now, such conceptions of dialectic have consequences for the understanding of all its elements, including the tools. According to Smith, for example, the repertory of probable statements to which these

³² 'Dialectic proceeds by asking questions, and so must rest on another person's answers' (Smith 1993, 344). See also Brunschwig 1967, x; xxiii; xxxv.

³³ See also Brunschwig 1989, 500: 'Les *Top.* veulent définir (...) une méthode de discussion (...) prenant appui sur des prémisses qui sont demandées au partenaire du dialogue et explicitement acceptées par lui; ce qui explique leur caractère essentiel, qui est de représenter des opinions.'

latter are ordered is aimed at the agreement of the interlocutor.³⁴ I think, rather, that the agreement of the interlocutors serves to confirm the statements repertoried. Furthermore, to limit dialectic to the agreement of the parties involved excludes the possibility of engaging in it alone.

I am, therefore, fully in agreement with Pelletier who admirably sums up the reasons for this conception of the dialectical statement and for the translation of *endoxos*:

La ratification, par le commun des mortels, par les sages ou par les spécialistes, ne constitue donc pas, comme on le dit généralement, l'essence même de la matière dialectique; c'en est plutôt comme le *signe naturel*. Mais, puisque ce signe donne le moyen objectif de la reconnaître, ce dont précisément a besoin le dialecticien pour discerner lui-même et pour faire admettre à son répondeur les propositions de son argumentation, il n'est pas étonnant qu'Aristote ait voulu définir la matière dialectique à partir de ce signe. Il faut dire plus: le mot *ἔνδοξον*, qu'il a choisi pour désigner cette matière, se rattache, par son étymologie, à cette conséquence *vérifiable* de sa nature. De sorte qu'on rend plus exactement l'idée d'Aristote par l'expression *idée admise*, comme le fait Brunschwig,³⁵ que par le mot

³⁴ See 1995, 61: 'What a dialectical method should do is make us able to deduce the conclusion we want from premises conceded by the opponent we are faced with. This can be accomplished if we can find premises that have two properties: (1) the desired conclusion follows from them, and (2) the answerer will concede them. Having various inventories of what various classes of people believe—what everyone believes, what most people believe, what the wise believe, etc.—would be useful for telling which premises an opponent would accept: I need only determine which class my opponent falls into and choose the relevant inventory.' See also Smith 1993, 340; 343: 'I shall argue below that it is Aristotle's intention to give special prominence to *endoxa* in the *Topics*. However, this is not because he regards "argument from *endoxa*" as the essential defining characteristic of dialectic (...) Aristotle's purpose in the *Topics* is to spell out a method for success in dialectical argument. Since dialectical premises must be secured by questioning, it is important to know what one's opponent is likely to accept or reject. We can do that most effectively if we have lists of things that people of different sorts accept: things that everyone accepts, things that the wise accept, etc.'

³⁵ However, Brunschwig places too much stress on the effect of the dialectical statement, which is to be *admitted*, and leaves aside its essential characteristic. For example: 'Une prémisses est "endoxale" lorsqu'elle a des répondants de poids, soit par le nombre, soit par la qualité. Pour savoir si une proposition possède ou non cette propriété, on notera donc qu'il n'y a pas lieu de la confronter avec les objets dont elle parle, pour voir si elle en exprime exactement ou non la nature et les propriétés; il est nécessaire et suffisant de rechercher si, jusqu'à quel point et dans quel milieu elle a cours' (1967, xxxv). He thus ends up with a conception of dialectic as something arbitrary: he no longer has anything to propose to justify the existence of a method which by definition has recourse to opinions. Le Blond 1939, 15 too, before Pelletier, escapes from this trap and recognizes that the foundation and the legitimacy of dialectic resides in the objectivity on which the admission of the opinions it uses is founded: 'le seul fait d'exprimer l'opinion du commun ou des sages, bien loin d'enfermer dans la probabilité purement extrinsèque, comporte plutôt, dans l'esprit d'Aristote, une certaine relation à l'expérience. La notion d'expérience, en effet, est singulièrement large, chez Aristote, et elle s'étend jusqu'à l'utilisation des opinions; l'opinion, d'après lui, constitue une sorte d'expérience indirecte, expérience qui dépasse, par son ampleur et sa durée, l'expérience de chaque individu, et qui par conséquent, doit lui être préférée (...) La déférence d'Aristote pour les opinions générales, son "respect marqué pour les croyances vulgaires, du moment qu'elles ne sont pas visiblement erronées", sont inspirés par la confiance qu'il accorde au "penchant naturel vers la vérité" que tous les hommes portent en eux. "Ce que tout le monde pense doit selon nous être vrai", déclare-t-il, et par suite, l'usage des opinions offre un moyen indirect, mais réel, de se

probable, selon l'habitude héritée de la tradition latine. Le mot *probable*, toutefois, n'est pas à rejeter. Il désigne fort bien la matière dialectique, et comme plus essentiellement. Alors qu'*endoxe*, ou *idée admise*, fait allusion au signe visible de cette matière dialectique, *probable* la désigne plus directement comme issue de la sympathie de la raison, comme proposition admissible spontanément, sans discussion ni réticence prononcée. *Probable*, en effet, dit que l'on peut approuver. Bref, on peut qualifier aussi bien d'*idée admise* ou de *probable* la connaissance antérieure qui fonde le progrès dialectique, à condition d'avoir conscience que la seconde appellation s'inspire plus directement de ce qui fonde sa légitimité comme principe, tandis que la première la regarde plutôt dans ce qui nous fait reconnaître cette légitimité en elle. (1991, 50-51)³⁶

One can now understand that to consider the dialectical statement and to understand by *probable* and *endoxal*, among other things, what is in conformity with reason and, at least indirectly, experience, rather than only stopping with what is *admitted* or *accepted*, shows well why the *probable* or the *endoxal* acquires a function in view of truth. Although coming directly from the subject, it is almost objective, since it resides in opinions that, in order to be *admitted* or *accepted*, must belong rather naturally, one could say, to human rational discourse and which, therefore, have some chance of being true.

Aristotle distinguishes four species of syllogism in the *Topics*, we said. It would seem that he does not need to do so in the *Analytics*. Getting ready to expound the theory of the syllogism in general, he then needs to mention demonstration since it is the most perfect actualization of the syllogism, and he also treats of the errors in relation to it. But when he gets to the dialectical syllogism, Aristotle needs to compare it with what he said previously and with its counterpart, which he will speak of afterwards. Whence the division into four that one finds at the beginning of the *Topics*.

The third species of syllogism is opposed to the second and the fourth, to the first:

rapprocher du vrai, de tenir le vraisemblable'. On this relation of opinion and experience, see Owen 1961, 90: 'Ἐνδοξα also rest on experience, even if they misrepresent it. If they did not Aristotle could find no place for them in his epistemology; as it is, an ἔνδοξον that is shared by all men is ipso facto beyond challenge'.

³⁶ See also the summary of section B, Chapter 2, 52: 'Bref, pour Aristote, ce qui, lorsque manque l'évidence appropriée, fait d'un énoncé un principe rationnellement acceptable, c'est, radicalement, que la raison s'y sent spontanément à l'aise. C'est bien là, ultimement, tout le fondement de la légitimité dialectique. Néanmoins, ce caractère ne peut pas s'observer directement. On doit, pour le manifester objectivement, recourir à son effet naturel: l'énoncé ainsi sympathique à la raison est admis de fait par tous ou la plupart; ou, du moins, pareille admission est escomptée sans réticence. Aussi Aristote est-il amené à nommer et à définir pour ainsi dire opérationnellement, par cet effet naturel, le principe du dialecticien.'

εἴη δ' ἄν, ὡς τῷ διαλεκτικῷ παράκειται ὁ σοφιστικὸς ὁ ἐκ φαινομένων ἐνδόξων, οὕτω καὶ οὗτος ὁ παραλογισμὸς τῷ ἐκ τῶν οἰκείων τῷ προκειμένῳ ἀρχῶν παρακείμενος τοὺς λόγους ἄγων ἐπὶ ψεύδους διὰ τινῶν ψευδῶν. (Alexander, *In Top.* 25.9-12)

Le premier chapitre des *Topiques* distingue (...) les variétés suivantes: «syllogisme» démonstratif, dialectique, éristique, et paralogisme. L'opposition fondamentale est celle qui sépare la démonstration et le «syllogisme» dialectique; les autres variétés résultent de l'adultération de l'un ou l'autre des éléments constitutifs de ces formes majeures. (Brunschwig 1967, xxxiv)

Why then place the syllogism opposed to the first after the syllogism opposed to the second, when one would have expected the reverse order? Maybe it is because the pseudograph is less known, and because no one intends to syllogize in this way. The smart man who is aiming at appearing wise by deceiving has a greater advantage in using arguments whose deficiency is to be found in a common form that he can transfer (ἀρμοσεῖν) from one matter to another.³⁷

Another question is that in the *Organon* we find separate books about only three of these. We may ask why. Albert says:

Sed materia remota sunt termini: et quoad hanc materiam est falsigraphicus ex convenientibus et propriis disciplinae sicut et demonstrativus. Et ideo non habet necesse proprium librum, in quo specialiter hic syllogismus doceatur: quia formam novam non habet, nec etiam materiam differentem a materia demonstrativi, sed qualitatem aliam habet materiae proximae et non remotae: quia ista eadem est in omni qualitate et quantitate. Propter quod cum differat ab aliis in materia aliquo modo considerata, praeter omnes alios modos est iste modus syllogismi. (*In Top.* 245a)

³⁷ In *Soph. el.* 11.171b34-172a7, and in respect to this question, we find a beautiful example of Aristotle's use of the third and fourth tools: ὁ δ' ἐριστικός ἐστὶ πῶς οὕτως ἔχων πρὸς τὸν διαλεκτικὸν ὡς ὁ ψευδογράφος πρὸς τὸν γεωμετρικόν· ἐκ γὰρ τῶν αὐτῶν τῷ διαλεκτικῷ παραλογίζεται, καὶ ὁ ψευδογράφος τῷ γεωμέτρῳ—ἀλλ' ὁ μὲν οὐκ ἐριστικός, ὅτι ἐκ τῶν ἀρχῶν καὶ συμπερασμάτων τῶν ὑπὸ τὴν τέχνην ψευδογραφεῖ· ὁ δ' ὑπὸ τὴν διαλεκτικὴν περὶ τᾶλλα ὅτι ἐριστικός ἐστὶ δῆλον. οἶον ὁ τετραγωνισμὸς ὁ μὲν διὰ τῶν μηνίσκων οὐκ ἐριστικός, ὁ δὲ θρύσωνος ἐριστικός· καὶ τὸν μὲν οὐκ ἐστὶ μετενεγκεῖν ἀλλ' ἢ πρὸς γεωμετρίαν μόνον, διὰ τὸ ἐκ τῶν ἰδίων εἶναι ἀρχῶν, τὸν δὲ πρὸς πολλούς, ὅσοι μὴ ἴσασι τὸ δυνατόν ἐν ἐκάστῳ καὶ τὸ ἀδύνατον· ἀρμόσει γὰρ.

Perhaps one reason is indeed that the defect, being in a particular matter, not much can be said about the pseudograph in general in logic. Aristotle in fact only considers this kind of syllogism very briefly, in Book I of the *Posterior Analytics* (Chapters 16, 17) after demonstration. But Euclid wrote a book, called the *Pseudaria or Pseudographemata*, about the paralogisms opposed to geometry. (Proclus and Alexander refer to this work which is now lost.) Fallacies depend on a form and matter that are sufficiently common, such that they can be considered in sufficient detail by the logician:

Est autem sciendum quod falsa conclusio non concluditur nisi falso syllogismo. Syllogismus autem potest esse falsus dupliciter. Uno modo, quia deficit in forma syllogistica. Et hic non est syllogismus, sed apparens. Alio modo, quia utitur falsis propositionibus. Et hic quidem est syllogismus propter syllogisticam formam, est autem falsus propter falsas propositiones assumptas. In disputatione ergo dialectica, quae fit circa probabilia, usus est utriusque falsi syllogismi, quia talis disputatio procedit ex communibus. Et ita in ea error attendi potest et circa materiam quam assumit, quae est communis, et etiam circa formam, quae est communis. Sed in disputatione demonstrativa, quae est circa necessaria, non est usus, nisi illius syllogismi qui est falsus propter materiam; quia ut dicitur in I *Topicorum*, paralogismus disciplinae procedit ex propriis disciplinae, sed non ex veris. Unde cum forma syllogistica sit inter communia computanda, paralogismus disciplinae, de quo nunc agitur, non peccat in forma, sed solum in materia, et circa propria, non circa communia. (Aquinas, *In Post. Anal.* I 27#227)

Also, the fact that there is the same knowledge of opposites, as Aristotle himself often says, would be another reason why there is no separate book devoted to the pseudograph:

Ejusdem artificis est considerare falsigraphum et demonstrativum. Tales enim falsigraphi sunt secundum ea quae sunt sub arte eadem: et ejusdem artificis est considerare eos, qui considerat verum syllogismum demonstrativum in arte illa. Et ideo non pertinent ad sophisticam et ad hanc scientiam quae de sophisticis est elenchis: unde tales paralogismi falsigraphi ad scientias pertinent disciplinales. (Albert, *In Soph. el.* 631b-632a)

This would also be another reason for thinking that the *Topics* and the *Sophistical Refutations* belong together.

IN VIEW OF HOW MANY THINGS, AND WHICH ONES THE METHOD IS USEFUL (CHAPTER 2)

Chapter 2 starts by proposing the uses of the treatise; according to Alexander, whoever knows them will be better disposed towards it (*In Top.* 26.25-30). It is in view of three things, enumerated in an ascending order of perfection: in view of exercise, encounters and discussions, and the philosophical disciplines:

Ἐπόμενον δ' ἂν εἴη τοῖς εἰρημένοις εἰπεῖν πρὸς πόσα τε καὶ τίνα χρήσιμος ἢ πραγματεία. ἔστι δὴ πρὸς τρία, πρὸς γυμνασίαν, πρὸς τὰς ἐντεύξεις, πρὸς τὰς κατὰ φιλοσοφίαν ἐπιστήμας. (*Top.* I 2.101a25-28)³⁸

But to the degree that finding a method is the purpose of the treatise, the exercise, the encounters and the philosophy for which the treatise serves are also what the method will serve for.

ὅτι μὲν οὖν πρὸς γυμνασίαν χρήσιμος, ἐξ αὐτῶν καταφανές ἐστι· μέθοδον γὰρ ἔχοντες ῥᾶον περὶ τοῦ προτεθέντος ἐπιχειρεῖν δυνησόμεθα· πρὸς δὲ τὰς ἐντεύξεις, διότι τὰς τῶν πολλῶν κατηριθμημένοι δόξας οὐκ ἐκ τῶν ἀλλοτρίων ἀλλ' ἐκ τῶν οἰκείων δογμάτων ὁμιλήσομεν πρὸς αὐτούς, μεταβιβάζοντες ὅ τι ἂν μὴ καλῶς φαίνωνται λέγειν ἡμῖν· (*Top.* I 2.101a28-34)³⁹

Aristotle often repeats his assertion that the dialectician, compared to the demonstrator, is not tied to one part of a contradiction, or to determinate principles. He is free to conjecture to opposites. Dialectic thus has a certain freedom and is the ideal place to maintain and develop the ability that is reason.

Parmenides: and I think that this arises, Socrates, out of your attempting to define the beautiful, the just, the good, and the ideas generally, without sufficient previous training. I noticed your deficiency, when I heard you talking here with your friend Aristoteles, the day before yesterday. The impulse that carries you towards philosophy is assuredly noble and divine; but there is an art which is called by the vulgar idle talking, and which is often imagined to be useless; in that you must train and exercise yourself, now that you are young, or truth will elude your grasp.

And what is the nature of this exercise, Parmenides, which you would recommend?

That which you heard Zeno practising; at the same time, I give you credit for saying to him that you did not care to examine the perplexity in reference to

³⁸ 'Next in order after what we have said would be to state the number and kinds of things our study is useful for. There are, then, three of these: exercise, encounters, and the philosophical sciences.' Smith translation

³⁹ 'Now, that it is useful in relation to exercise is obvious at once, for if we have a method we shall be able more easily to attack whatever is proposed. And it is useful in relation to encounters because, once we have reckoned up the opinions of the public, we shall speak to them, not from the beliefs of others, but from their own beliefs, changing their minds about anything they may seem to us not to have stated well.' Smith translation

visible things, or to consider the question that way; but only in reference to objects of thought, and to what may be called ideas.

Why, yes, he said, there appears to me to be no difficulty in showing by this method that visible things are like and unlike and may experience anything.

Quite true, said Parmenides; but I think that you should go a step further, and consider not only the consequences which flow from a given hypothesis, but also the consequences which flow from denying the hypothesis; and that will be still better training for you.

What do you mean? he said.

I mean, for example, that in the case of this very hypothesis of Zeno's about the many, you should inquire not only what will be the consequences to the many in relation to themselves and to the one, and to the one in relation to itself and the many, on the hypothesis of the being of the many, but also what will be the consequences to the one and the many in their relation to themselves and to each other, on the opposite hypothesis. Or, again, if likeness is or is not, what will be the consequences in either of these cases to the subjects of the hypothesis, and to other things, in relation both to themselves and to one another, and so of unlikeness; and the same holds good of motion and rest, of generation and destruction, and even of being and not-being. In a word, when you suppose anything to be or not to be, or to be in any way affected, you must look at the consequences in relation to the thing itself, and to any other things which you choose to each of them singly, to more than one, and to all; and so of other things, you must look at them in relation to themselves and to anything else which you suppose either to be or not to be, if you would train yourself perfectly and see the real truth. 135d-136d

And Albert places the emphasis on the fact that the ability to reason in both directions makes of dialectic a privileged exercise for reason, whose proper characteristic is to proceed from one thing to another:

Omnis autem habitus facultatem conferens ad facile de proposito arguendum de utraque parte contradictionis, valet ad exercitationes, hoc est, ad frequentes artis operationes, per quas facilius semper efficitur artem habens: ergo ista ars valet ad exercitationes. (*In Top.* 246)

Using the fourth tool, Alexander very nicely ties this use to the third one. Exercise, as carried out in dialectic, is a preparation of the soul for truth:

χρήσιμος δὲ ἡ τοιαύτη κατὰ τοὺς λόγους γυμνασία πρὸς εὗρεσιν τῶν ζητουμένων τε καὶ ἀληθῶν, ὡς καὶ αὐτὸς ἐρεῖ δι' ὧν τὸ πρὸς φιλοσοφίαν αὐτῆς ἐκθήσεται χρήσιμον· προπαρασκευάζει γὰρ τὴν ψυχὴν. ὡς γὰρ τὰ τοῦ σώματος γυμνάσια γινόμενα κατὰ τέχνην εὐεξίαν περιποιεῖ τῷ σώματι, οὕτω καὶ τὰ τῆς ψυχῆς ἐν λόγοις γυμνάσια κατὰ μέθοδον γινόμενα τὴν οἰκείαν εὐεξίαν

τῆ ψυχῆ περιποιεῖ· οἰκεία δὲ εὐεξία ψυχῆς λογικῆς ἢ
δύναμις καθ' ἣν εὐρετικὴ τε τοῦ ἀληθοῦς καὶ κριτικὴ
γίνεται. (*In Top.* 27.24-31)

Whence it is clear that the current interpretation of this passage does not go back to Alexander, who very clearly sees the tie between exercise and investigation, of which Pelletier speaks, although the latter adds that inversely, even when in the service of the philosophical sciences, dialectic consists in an exercise:

Mais il ne faudrait pas que cette hypertrophie d'artifice dans l'exercice fasse oublier que, déjà dans son essence, même incarnée dans l'investigation la plus sincère, la dialectique est exercice pour la raison. (1991, 88)

Paul Moraux, on the other hand, a good representative of the modern trend, tends to reduce all of dialectic and the reach of the *Topics* to artificial situations that exercises lend themselves to.⁴⁰

Not only does dialectic thus serve the act of the dialectician as it were formally, but it also serves his end materially by the fact that it is useful for encounters.⁴¹ It allows one to investigate problems for which none of the interlocutors has yet a scientific solution, and by doing so, to bring out what they appear not to be saying correctly.

Alexander remarks that Aristotle, having insisted on the distinction between dialectic and *endoxa*, demonstration and truth, then explains that the treatise is nonetheless not without some

⁴⁰ See 1968, 290; 297: 'il y a loin du dialogue socratique à la joute dialectique aristotélicienne. Celle-ci a visiblement une allure beaucoup plus scholastique. Les deux partenaires sont fixés dès le début sur leurs positions respectives, savent exactement à quoi va tendre l'adversaire, se sont préparés du mieux qu'ils pouvaient à l'attaque et à la défense et n'ignorent pas que chacune de leurs réactions inadéquates peut leur être fatale; l'entretien socratique, libre et enjoué, s'est sclérosé en un exercice d'école régi par des règles strictes; l'une d'entre elles, qui prévoit pour le questionneur la mission de diriger la marche du raisonnement, et pour le répondant l'interdiction presque absolue de répondre autrement que par oui ou par non, exclut la possibilité d'une réelle confrontation d'arguments et d'un véritable échange d'idées; elles correspondent à une situation qui se rencontre ici et là dans les premiers dialogues de Platon, mais dont on ne saurait pour autant faire une marque essentielle de l'entretien socratique.'

⁴¹ Pelletier 1991 thinks that exercise is particularly concerned with the places, whereas encounters are more perfective of the instruments. For his commentary on Chapter 2, see 83-97. Alexander also seems to think that exercise perfects the ability to attack: λέγει δὲ γυμνασίαν ἥτοι τὴν γινομένην ἐν τῷ διαλέγεσθαι πρὸς τινὰς· δεχόμενοι γάρ τινα προβλήματα παρὰ τῶν προσδιαλεγόμενων γυμναζόμενοι πειρῶνται τούτοις παρίστασθαι, δι' ἐνδόξων τὰς ἐπιχειρήσεις ποιοῦμενοι· ἢ γυμνασίαν λέγοι ἂν τὴν εἰς ἑκάτερον μέρος ἐπιχείρησιν (*In Top.* 27.8-12).

ties to philosophy and that dialectic is useful also in view of discovering what is true (*In Top.* 26.30-27.4). Afterwards Aristotle does mention the uses we are the most interested in, namely those in respect to the philosophical disciplines. They are, in fact, the results which we might expect that Aristotle would obtain in his treatises, if he were using dialectic as described in the *Topics*:

πρὸς δὲ τὰς κατὰ φιλοσοφίαν ἐπιστήμας, ὅτι δυνάμενοι πρὸς ἀμφοτέρωθεν διαπορῆσαι ῥᾶον ἐν ἐκάστοις κατοψόμεθα τᾷ ἀληθές τε καὶ τὸ ψεῦδος· (*Top.* I 2.101a34-36)⁴²

Alexander uses, in his commentary on this passage of the *Topics*, the image of the trial that Aristotle used in the *Metaphysics* to illustrate that to argue to opposites allows one to better judge of the truth. It is after having heard the parties that the judge can best come to know what is just:

οἱ γὰρ δυνάμενοι τὰ πιθανὰ πρὸς τὰ ἀντικείμενα συντελοῦντα διορᾶν καὶ εἰς ἀμφοτέρωθεν ἐπιχειρεῖν ῥᾶον ἂν εὕρισκοιεν ἐν ποτέρῳ αὐτῶν μέρει τῆς ἀντιφάσεως τὸ ἀληθές ἐστίν, ὡς περ ἀντιδίκων ἀμφοτέρων τῶν μερῶν ἀκηκόετες. ὡς γὰρ ὁ δικαστὴς διὰ τοῦ ἀμφοτέρων ἀκοῦσαι τὸ δίκαιον γνωρίζει, οὕτως καὶ ἐν ταῖς κατὰ φιλοσοφίαν ζητήσεσιν ἐπὶ πολλῶν οὐχ οἷον τε τὸ ἀληθές εὕρειν ῥαδίως μὴ πρότερον εἰς ἑκάτερον ἐπιχειρήσαντα. (Alexander, *In Top.* 27.26-28.2)

Alexander explains how arguing to opposites, as dialectic is able to do, serves for the discovery of the truth. This is because it is in the nature of the probable that the dialectician concludes to, that it leaves a doubt in his mind whether in fact the contradictory might be true. Whence he will cling the more firmly to a position the more he has the opportunity to see the non-existence, the small number, or the weakness of the opinions from which its contradictory follows:

ἔτι ὁ εἰδὼς τὴν τοῦ πιθανοῦ φύσιν οὐκ ἂν ὑπ' αὐτοῦ παραχθείη ποτὲ ὡς ἀληθοῦς ὄντος, ἀλλὰ προκρίνοι ἂν τὰ φαινόμενα ἀληθῆ τῶν μὴ ἀληθῶν τῇ παραβολῇ αὐτῶν τῇ πρὸς ἄλληλα· δι' ὧν γὰρ τὸ ἀληθές τινες

⁴² 'It is useful in relation to the philosophical sciences because if we have the ability to go through the difficulties on either side we shall more readily discern the true as well as the false in any subject.' Smith translation. See also VIII 14.163b9-12, already quoted. We must understand here that the hypotheses are the initial positions: in fact, at the beginning of the chapter, Aristotle speaks about converting, under the form of a reduction, the arguments supporting opposed positions that one is preparing to examine.

ἀφανίζεῖν πειρῶνται, τούτοις τις ἐγγεγυμνασμένος οὐκ ἂν ὑπ' αὐτῶν παράγοιτο. (Alexander, *In Top.* 29.6-10)

Furthermore, as the ability for solving objections is a sign of having the truth, so arguing to both sides, since it allows one to examine and to become familiar with all the arguments and thus, finally, to discover how to answer those that support the less probable side, serves the truth.

ἔτι δὲ εἰ δεῖ τὸν περὶ τινος ὑγιῶς τε καὶ ὀρθῶς λέγοντα τοιούτους τοὺς περὶ αὐτοῦ ποιεῖσθαι λόγους ὡς δύνασθαι δι' αὐτῶν λύεσθαι καὶ τὰ ἀπορούμενα περὶ αὐτοῦ, δῆλον ὡς χρήσιμον τὸ γεγυμνάσθαι ἐν τοῖς πρὸς αὐτὸ ἀπορεῖσθαι δυναμένοις· οὕτω γὰρ συνορᾶν δύναται ἂν καὶ τὰς λύσεις τῶν ἀπορουμένων. (Alexander, *In Top.* 29.12-16)⁴³

Further on, we will compare this passage with those of the *Metaphysics* and the *De Caelo* where Aristotle also gives reasons for arguing to opposites. For the moment, let us ask if the two ways in which dialectic is useful for philosophy are distinct. For Aristotle says further:

ἔτι δὲ πρὸς τὰ πρῶτα τῶν περὶ ἐκάστην ἐπιστήμην. ἐκ μὲν γὰρ τῶν οἰκείων τῶν κατὰ τὴν προτεθεισάν ἐπιστήμην ἀρχῶν ἀδύνατον εἶπεῖν τι περὶ αὐτῶν, ἐπειδὴ πρῶται αἱ ἀρχαὶ ἀπάντων εἰσί, διὰ δὲ τῶν περὶ ἕκαστα ἐνδόξων ἀνάγκη περὶ αὐτῶν διελεῖν. τοῦτο δ' ἴδιον ἢ μάλιστα οἰκεῖον τῆς διαλεκτικῆς ἐστίν· ἐξεταστικὴ γὰρ οὖσα πρὸς τὰς ἀπασῶν τῶν μεθόδων ἀρχὰς ὁδὸν ἔχει. (*Top.* 12.101a36-b3)⁴⁴

⁴³ Alexander says that the most important uses of logic in general belong to philosophy: Ἡ λογικὴ τε καὶ συλλογιστικὴ πραγματεία ἢ νῦν ἡμῖν προκειμένη (...) ἔστι μὲν ἔργον φιλοσοφίας, χρῶνται δὲ αὐτῇ καὶ ἄλλαι τινὲς ἐπιστήμαι καὶ τέχναι, ἀλλὰ παρὰ φιλοσοφίας λαβοῦσαι· ταύτης γὰρ ἢ τε εὕρεσις ἐστὶ καὶ ἢ σύστασις καὶ ἢ πρὸς τὰ κυριώτατα χρήσις (*In An. pr.* 1.3-7). And he says a few pages further: ὁ τε γὰρ ἐν τοῖς διαλεκτικοῖς γυμνασάμενος συλλογισμοῖς καὶ τὸ πιθανὸν καὶ τὸ παρακείμενον ἀληθεῖ συνορᾶν δυνάμενος ῥᾶον τὸ ἀληθὲς εὕρισκει οὐκ ἀπατῶμενος ὑπὸ τῆς ὁμοιότητος τοῦ πιθανοῦ τῆς πρὸς ἀληθές, ἀλλ' εἰδὼς αὐτοῦ τὴν διαφορὰν (8.24-26).

⁴⁴ Furthermore, it is useful in connection with the first of the starting-points about any individual science. For if we reason from the starting-points appropriate to the science in question, it is impossible to make any statement about these (since these starting-points are the first of them all), and it is by means of what is

As dialectic is an ability for arguing in opposed directions, and this is so even when it is being used for exercise and encounters, the second utility seems to be a special part of the first. In short, Aristotle tells us that dialectic is useful in view of discovering the truth because it allows us to argue in both directions. He then establishes its proper object: it alone indeed can arrive at the first principles. (Which does not at all exclude the fact that to argue in two directions also allows one to judge of the truth of conclusions. Nonetheless, this is not a task for which dialectic is adequate. Demonstrative reason alone will suffice for this.) And this is what Alexander, Albert and Maurus think:

Valet autem ad secundum philosophiam disciplinas: quoniam ex ista arte potentes ex artis facultate ad utraque dubitare, hoc est, ad utramque partem contradictionis in quolibet problemate, facile speculabimur in singulis quae sunt scientiarum: videbimus autem quid verum et quid falsum sit, et hoc in problematibus et conclusionibus singulorum. Amplius autem ob hoc ad secundum philosophiam disciplinas utile est hoc negotium: quia ad prima, hoc est, ad principia philosophiarum quae sunt circa unamquamque disciplinam. (Albert, *In Top.* 246b)⁴⁵

One objection abundantly treated in the literature is how it is possible to show what is known by itself. We will see further on how I have analyzed cases where the use of the tools allows Aristotle to establish definitions. But I think that the most important and enlightening thing is to mention that if it is indeed impossible to demonstrate an immediate statement, nothing prevents one from arguing to such a conclusion. One has only to proceed from what follows from it.⁴⁶ The argument in this case is the cause of coming to know, but not of knowing. A bit like pointing to an object is the cause of our coming to see it, but not of our seeing it, so too, the dialectical argument helps someone to understand a statement without being the cause of its understanding. For example, someone can be led to grasping the principle of contradiction by a dialectical argument, but the argument in question is not the cause of grasping it.

All that the present passage says is that such critical examinations are 'useful' in 'discussing' scientific starting-points, and that falls far short of claiming that dialectic either establishes or discovers those starting-points. (Smith 1997, 54)

acceptable about each that it is necessary to discuss them. But this is unique, or at any rate most appropriate, to dialectic: for since its ability to examine applies to the starting-points of all studies, it has a way to proceed.' Smith translation

⁴⁵ See Alexander, *In Top.* 30.7-12 and Maurus, 395#2. See also Evans 1977, 31-32.

⁴⁶ See Albert, *In Top.* 247a.

This question has in fact led to a controversy that it would be impossible to present adequately here. We can find a whole gamut of opinions, which run from seeing dialectic as the method of science, to the restriction of its function to denouncing the incoherence of certain positions, as Smith sometimes tends to do.⁴⁷

Certain authors, among whom Aubenque 1962, 300; Lugarini 1959, 67; Berti 1970, 77 are not content to recognize the usefulness of dialectic for discovering the first principles. They judge that it alone can suffice, and they go on to make of it the method of metaphysics, since these principles are supposed to pertain to 'first philosophy'. Consequently, many tendencies are to be found in this matter. One opinion that seems clearly untenable to me is that of Berti 1970, 57. How can one accept, as he does, that dialectic and metaphysics, proceeding from opinions, lead to first principles without certitude, but that nonetheless the particular sciences, which use these principles, demonstrate?

Another tendency: to the degree that one can take for granted that the principles which pertain to metaphysics, because they are the first principles, cannot be other than certain, and faced with Aristotle's affirmation that dialectic is the way to these principles, one might think that it allows more-or-less certain conclusions. Dialectic would then not only be the method of metaphysics, but of all the sciences and of the whole enterprise of philosophy. Recently, many authors seem to have run in this direction. Bolton spoke, in his 1990 article, of a 'widely influential current estimate of Aristotle's attitude toward dialectic as a tool for not only philosophical but also scientific inquiry'. He continued:

In place of the earlier view that the method of the *Analytics* supercedes and replaces the method of dialectic, the view now more dominant is that whatever other methodological procedures Aristotle may introduce [in those writings of an epistemological kind] none is intended in any way to supercede dialectic [in the scientific treatises] as the proper method of scientific or other inquiry and, in particular, as the proper to use to discover the first principles of the sciences (...) [it] is now widely held, that the method of dialectic is on its own totally adequate and sufficient for Aristotle for the justification of results in science, in philosophy and elsewhere. (Bolton 1990, 186; 190)⁴⁸

This vision has as a problematic consequence that one can no longer understand what advantage demonstration brings and how the *Analytics* help us to understand it. One is even

⁴⁷ See 1997, xviii.

⁴⁸ See, for examples of this position, Witt 1992, 169 and Barnes 1980, 494-495.

led to think that the essential part of the task is accomplished by the dialectician and that there remains only an ordering and laying out of the discoveries afterwards.

By contrast, the method of searching for and setting out demonstrations which is discussed in the *Analytiks* is commonly taken nowadays to have to do not with genuine discovery or the epistemic justification which that may involve, but only with what is required, after dialectical inquiry is completed, either to systematically *display* the results of inquiry [G.E.L. Owen], or to *impart* these results to learners [J. Barnes] or to deeply *understand* these results [M. Burnyeat]. (Bolton 1990, 186)⁴⁹

One dissident figure to be found here is Martha Nussbaum, who, in *The Fragility of Goodness*, affirms that dialectic, a 'method of appearances', is unable to procure certain propositions and, consequently, certain conclusions to be obtained by reasoning from these things. Following this opinion, there would be dialectic everywhere also, but nonetheless never any certitude. Still, W. Wians 1992 answered by explaining the dominant position. Barnes too proposes an explanation of how the *endoxa* acquire the ability to furnish certain principles. And T.H. Irwin 1988 affirms that a method that proceeds from *endoxa* can lead to some certitude: this is not possible with just any opinions, however. Irwin distinguishes, in fact, between pure and strong dialectic: it is only in the latter, to be found in the mature works of Aristotle, such as the *Metaphysics* and the *De Anima*, which proceed from a limited repertory of more certain *endoxa*, that Irwin sees this ability to reach certain principles.

It is impossible to adequately take account of these three last authors here, but they seem to be closer to Pelletier's solution, the most satisfactory one I have run across to the problem we laid out, namely, does dialectic establish the first principles in a certain way or not? It consists in recognizing that the term of dialectic at its best is a 'pre-intuition' of the certain principles, and not some properly scientific result. In other words, dialectical argumentation does not suffice to establish the principles; it rather prepares the way for an immediate apprehension of the principles and of their necessity. Thus, that discourse of reason that is ordered to certain conclusions would in fact be the exclusive domain of the demonstrative method, as described in the *Posterior Analytics*.⁵⁰

⁴⁹ See also Lugarini 1959, 60.

⁵⁰ See 1991, 92-97. Burnet 1900, who thinks that justification is based on intuitive awareness of the self-evidence of propositions and who solves the problem by treating dialectic as a method of discovery only, not of justification, is, among the modern commentators, one of those who hold a position similar to that of Pelletier. For other details on the state of this question, see Smith 1997, 52-54. See also Smith 1993.

To end our remarks on Chapter 2, let us note that even if Plato presented a tendency to confuse dialectic and demonstration, as he does in fact in the following passage, the master of Aristotle certainly saw that dialectic constituted a way to the principles:

Understand now that I mean by the second division of the intelligible world the one that reason itself reaches by the power of dialectic propounding hypotheses that it does not regard as principles, but really only as hypotheses, namely, starting points and springboards to raise itself up to the universal principle that no longer supposes any condition; once this principle has been seized, it attaches itself to all the consequences that depend on it, and descends thus all the way to the conclusion without having recourse to any sensible datum but only to the ideas by which it proceeds and at which it finishes. (Plato, *Resp.* VI 511e)

WHEN DOES ONE POSSESS THE METHOD SUFFICIENTLY? (CHAPTER 3)

Brunschwig sums up rather well the general idea of this short chapter by saying that dialectic is one of these techniques where success does not depend uniquely on the mastery of the one who uses it:

pas plus que le meilleur médecin ne guérit «de toute manières», «à tout coup», «quelles que soient les circonstances» (...), le meilleur dialecticien ne gagne toutes ses batailles; ils peuvent tomber sur un malade incurable, sur un moins bon dialecticien. Ils n'en sont pas moins bon médecin, moins bon dialecticien. (1967, 117n3)

Just like the doctor or the orator, the dialectician will be thought to have perfect mastery of his method if he has not neglected any of the possibilities open to him.⁵¹ Alexander explains that in respect to the conjectural arts such as dialectic, rhetoric and medicine, and contrary to the "making" arts, which proceed by determinate means, obtaining the end is not a necessary sign that the agent has operated according to the art. For the end can be reached by chance, without the appropriate means having been used, whereas in arts such as building and weaving, obtaining the end is a sign that the agent has proceeded with art.⁵²

⁵¹ See Waitz 1846, 443: 'neque orator quodcumque vult auditoribus persuadere, neque medicus omnem morbum sanare potest sed uterque artem suam optime callet, si consideratis omnibus quae pro re nata et pro tempore fieri possint nihil negligat quod ad finem propositum conducatur.'

⁵² See Alexander, *In Top.* 32.11-34.5.

In the *Rhetoric*, Aristotle explains more what he understands by 'accomplish the goal proposed with the help of the possibilities one has on hand'.⁵³ To possess rhetoric perfectly does not imply, in fact, that one is perfectly accomplishing the goal of the orator, but only that one is trying by all the available means, given the particular circumstances:

ὅτι μὲν οὖν οὐκ ἔστιν οὐθενός τινος γένους ἀφωρισμένου ἢ ῥητορικῆ, ἀλλὰ καθάπερ ἡ διαλεκτικῆ, καὶ ὅτι χρήσιμος, φανερόν, καὶ ὅτι οὐ τὸ πείσαι ἔργον αὐτῆς, ἀλλὰ τὸ ἰδεῖν τὰ ὑπάρχοντα πιθανὰ περὶ ἕκαστον, καθάπερ καὶ ἐν ταῖς ἄλλαις τέχναις πάσαις (οὐδὲ γὰρ ἰατρικῆς τὸ ὑγιᾶ ποιῆσαι, ἀλλὰ μέχρι οὗ ἐνδέχεται, μέχρι τούτου προσαγαγεῖν· ἔστιν γὰρ καὶ τοὺς ἀδυνάτους μεταλαβεῖν ὑγείας ὅμως θεραπεύσαι καλῶς). (*Rh.* I 1.1355b8-14)⁵⁴

Evans 1977, 89 notes that Aristotle's comments on the character of his treatment of dialectic in the *Topics* bear a considerable similarity to his comments on his treatment of ethics in the *Nicomachean Ethics*.

It is, in fact, difficult to judge if someone possesses the method fully, it is easier to judge who does not have it. For checking that some one possible means for an argument has been neglected is easier than to be sure all the possible means have been explored and exploited.

⁵³ τὸ ἐκ τῶν ἐνδεχομένων ποιεῖν ἃ προαιρούμεθα (*Top.* I 3.101b7).

⁵⁴ 'It is thus evident that Rhetoric does not deal with any one definite class of subjects, but, like Dialectic, [is of general application]; also, that it is useful; and further, that its function is not so much to persuade, as to find out in each case the existing means of persuasion. The same holds good in respect to all the other arts. For instance, it is not the function of medicine to restore a patient to health, but only to promote this end as far as possible; for even those whose recovery is impossible may be properly treated.' Freese translation

CHAPTER THREE

THE PARTS OF THE DIALECTICAL ARGUMENT

Before approaching the dialectical tools, we will undertake a brief consideration of the four predicates from which dialectical premises and problems are made; of what a dialectical premise and problem are; and of the kinds of argument made by the dialectician. These tools are, indeed, as has been said, one of the means, along with the places, for obtaining dialectical arguments. Now, whoever seeks to understand what is essentially ordered to an end must necessarily know that end. In fact, the better he knows the end, the better he will understand the means.

THE INTEGRAL PARTS OF THE DIALECTICAL ARGUMENT (CHAPTERS 4-11)

THE REMOTE PARTS: THE DEFINITION, THE PROPERTY, THE GENUS AND THE DIFFERENCE, THE ACCIDENT. (CHAPTERS 4-9)

At the beginning of Chapter 4, we said that Aristotle was undertaking a consideration of the nature and the number of the elements and subjects of dialectical reasoning. Looking first to what can be said convertibly and what cannot, he divides into three: the property, the genus and the accident:

πᾶσα δὲ πρότασις καὶ πᾶν πρόβλημα ἢ ἴδιον ἢ γένος ἢ συμβεβηκὸς δηλοῖ· καὶ γὰρ τὴν διαφορὰν ὡς οὕσαν γενικὴν ὁμοῦ τῷ γένει τακτέον. (*Top.* I 4.101b17-19)¹

He then subdivides what is convertible according as it expresses the ‘what-it-is’ of a thing or not. Whence, what he first called the ‘property’ designates both the definition and the ‘property’ in the strict sense, and the fundamental predicates of dialectic are four:

ἐπεὶ δὲ τοῦ ἴδιου τὸ μὲν τὸ τί ἦν εἶναι σημαίνει ὄρος, τὸ δ’ οὐ σημαίνει διηρησθῶ τὸ ἴδιον εἰς ἄμφω τὰ προειρημένα μέρη, καὶ καλείσθω τὸ μὲν τὸ τί ἦν εἶναι σημαίνον ὄρος, τὸ δὲ λοιπὸν κατὰ τὴν κοινὴν περὶ αὐτῶν ἀποδοθεῖσαν ὀνομασίαν προσαγορευέσθω ἴδιον. δῆλον οὖν ἐκ τῶν εἰρημένων ὅτι κατὰ τὴν νῦν διαίρεσιν τέτταρα τὰ πάντα συμβαίνει γίνεσθαι, ἢ ὄρον ἢ ἴδιον ἢ γένος ἢ συμβεβηκός. (*Top.* I 4.101b19-25)²

In Chapter 5, Aristotle undertakes a special study of the definitions of these four elements:

Λεκτέον δὲ τί ὄρος, τί ἴδιον, τί γένος, τί συμβεβηκός. (*Top.* I 5.101b37)³

Definition is a speech expressing what a thing is.⁴ Property can be convertible with a thing but does not express its essence.⁵ Genus is essentially attributed to things which are many and

¹ ‘every premiss, as well as every problem, exhibits either a unique property, a genus or an accident (the differentia, since it is genus-like, should be classified together with the genus).’ Smith translation

² ‘But since one sort of unique property signifies what it is to be something and another sort does not, let us divide unique properties into both the parts stated, and let us call the sort that signifies what it is to be something a definition, while the remaining sort may be referred to as a unique property, in accordance with the common designation given to them. Clearly, then, from what has been said, it turns out that according to the present division they are four in all: either definition, unique property, genus, or accident.’ Smith translation

³ ‘We must say what a definition is, what a unique property is, what a genus is, and what an accident is.’ Smith translation

⁴ ἔστι δ’ ὄρος μὲν λόγος ὃ τὸ τί ἦν εἶναι σημαίνων (*Top.* I 5.101b38).

⁵ ἴδιον δ’ ἐστὶν ὃ μὴ δηλοῖ μὲν τὸ τί ἦν εἶναι, μόνῳ δ’ ὑπάρχει καὶ ἀντικατηγορεῖται τοῦ πράγματος (*Top.* I 5.102a18-19).

differ from one another specifically.⁶ Two definitions of accident are given. The first is negative: it is whatever is neither definition, nor property, nor genus, but nonetheless does belong to the thing. The second, that Aristotle qualifies as better, is positive: it is whatever can belong or not belong to a thing.⁷

First, Aristotle simply asserted that all predicates can be classified according to these four. Later, in Chapter 8, he will prove it. First, by an induction. If, indeed, one examines one by one the statements and questions, one will see that each of them comes either from the definition of the thing, or from its property, or its genus, or an accident. Then he does so by means of a reason:

ἄλλη δὲ πίστις ἢ διὰ συλλογισμοῦ. ἀνάγκη γὰρ πᾶν τὶ περὶ τινος κατηγορούμενον ἢτοι ἀντικατηγορεῖσθαι τοῦ πράγματος ἢ μὴ. καὶ εἰ μὲν ἀντικατηγορεῖται, ὅρος ἢ ἴδιον ἂν εἴη (εἰ μὲν γὰρ σημαίνει τὸ τί ἦν εἶναι, ὅρος, εἰ δὲ μὴ σημαίνει, ἴδιον· τοῦτο γὰρ ἦν ἴδιον, τὸ ἀντικατηγορούμενον μὲν μὴ σημαῖνον δὲ τὸ τί ἦν εἶναι). εἰ δὲ μὴ ἀντικατηγορεῖται τοῦ πράγματος, ἢτοι τῶν ἐν τῷ ὀρισμῷ τοῦ ὑποκειμένου λεγομένων ἐστὶν ἢ οὐ. καὶ εἰ μὲν τῶν ἐν τῷ ὀρισμῷ λεγομένων, γένος ἢ διαφορὰ ἂν εἴη, ἐπειδὴ ὁ ὀρισμὸς ἐκ γένους καὶ διαφορῶν ἐστίν· εἰ δὲ μὴ τῶν ἐν τῷ ὀρισμῷ λεγομένων ἐστὶ, δῆλον ὅτι συμβεβηκὸς ἂν εἴη· τὸ γὰρ συμβεβηκὸς ἐλέγετο ὅ μῆτε ὅρος μῆτε ἴδιον μῆτε γένος ἐστίν, ὑπάρχει δὲ τῷ πράγματι. (*Top.* I 8.103b6-19)⁸

⁶ γένος δ' ἐστὶ τό κατὰ πλείονων καὶ διαφερόντων τῷ εἶδει ἐν τῷ τί ἐστὶ κατηγορούμενον (*Top.* I 5.102a31-32).

⁷ Συμβεβηκὸς δὲ ἐστὶν ὃ μὴδὲν μὲν τούτων ἐστὶ, μῆτε ὅρος μῆτε ἴδιον μῆτε γένος, ὑπάρχει, δὲ τῷ πράγματι, καὶ ὃ ἐνδέχεται ὑπάρχειν ὄψοῦν ἐνὶ καὶ τῷ αὐτῷ καὶ μὴ ὑπάρχειν (*Top.* I 5.102b4-7).

⁸ 'Another proof is through deduction. For necessarily, whenever one thing is predicated of another, it either counterpredicates with the subject or it does not. And if it does counterpredicate, then it must be a definition or a unique property (for if it signifies what it is to be something it is a definition, while if it does not it is a unique property—that is what we said a unique property was, something which counterpredicates but does not signify what it is to be). But if it does not counterpredicate with the subject, then either it is among the things stated in the definition of the subject or it is not. If it is among the things stated in the definition, then it must be a genus or a differentia, since a definition is composed of a genus and differentiae. On the other hand, if it is not among the things stated in the definition, then it is clear that it must be an accident, for an accident was said to be what is neither a definition nor a unique property nor a genus but still belongs to the subject.' Smith translation

Thus, the four predicates can be distinguished by criss-crossing two divisions into two. The distinction between what is said of convertibly and what is said of not convertibly, and the distinction between what is said of as inside the nature and what is said of not as inside the nature.

Finally, in Chapter 9, Aristotle explains that it will always be a thing belonging to one of the ten categories which will be predicated according to one of the aforesaid ways in which something can be predicated:

Μετὰ τοίνυν ταῦτα δεῖ διορίσασθαι τὰ γένη τῶν κατηγοριῶν, ἐν οἷς ὑπάρχουσιν αἱ ῥηθεῖσαι τέτταρες. ἔστι δὲ ταῦτα τὸν ἀριθμὸν δέκα, τί ἐστι, ποσόν, ποῖόν, πρὸς τι, ποῦ, ποτέ, κείσθαι, ἔχειν, ποιεῖν, πάσχειν. ἀεὶ γὰρ τὸ συμβεβηκὸς καὶ τὸ γένος καὶ τὸ ἴδιον καὶ ὁ ὀρισμὸς ἐν μιᾷ τούτων τῶν κατηγοριῶν ἔσται. (*Top. I* 9.103b20-25)⁹

This division of dialectical premises and problems (*Top. I* 4.101b17-18) certainly inspired the division of the names said of many things univocally—the predicables, in opposition to the categories or ‘predicaments’—that one finds in Porphyry’s *Isagoge* and which became such a central notion in the study of logic in the Middle Ages. The two divisions have often been compared as if they were dividing the same thing.¹⁰ Whence my different explanation of their differences.

A definition is not a name, but is composed of names. That’s why, I think, definition would not come under what Porphyry is dividing. But I agree with the reason usually given to explain why Aristotle does not consider species in the *Topics*, namely, that a dialectical problem consists in asking if an attribute belongs to a subject that is universal. Thus, the lowest species do not give rise to another kind of dialectical problem, since here we do not have another kind of predicate said of a universal subject.

⁹ ‘Now then, next after this we must distinguish the categories of predications in which the four types of predications mentioned are found. These are ten in number: what-it-is, quantity, quality, relation, location, time, position, possession, doing, undergoing. An accident, a genus, a unique property, and a definition will always be in one of these categories, for all the premisses produced by means of them signify either a what-it-is, or a quantity, or a quality, or some one of the other categories.’ Translation Smith

¹⁰ See Brunschwig 1967, xlv, n2; Smith 1997, 57: ‘In later antiquity these five “predicables”, as they were later called, took on considerable importance in metaphysics as well as logic. If we put “species” in place of “definition”, we have the “five terms” of Porphyry’s *Introduction to Logic* (commonly known under the title *Quinque Voces*), which became one of the most familiar handbooks of logic in the early Middle Ages.’

It is unanimously admitted by the commentators that these four notions furnish the basis for the division of the following books of the *Topics*; it should be noted, however, that Aristotle does not give them the common name of ‘predicables’ in the *Topics*, and that this use reflects the confusion of this division with that of Porphyry:

In order to be “equipped to deal with” problems and premisses in a systematic way, we must first classify them, then learn methods for dealing with each class. A system for classifying propositions is therefore crucial to Aristotle’s dialectical art. The one he advocates begins by classifying the relationship asserted to hold between subject and predicate of a proposition: the predicate may be *definition* (*horos*), *genus* (*genos*), *unique property* (*idion*), or *accident* (*sumbebekos*) of the subject. In fact, as Aristotle mentions in passing, there is a fifth possibility: the predicate may also be the *differentia* (*diaphora*) of the subject (...) The entire structure of the *Topics* rests on this fourfold division: Books II-III deal with accidents, IV with genera, V with unique properties, and VI and (in part) VII with definitions. (Smith 1997, 57)¹¹

THE PROXIMATE PARTS: THE STATEMENTS. (CHAPTERS 10-11)

What Is A Dialectical Premise. (Chapter 10)

Πρῶτον τοίνυν διωρίσθω τί ἐστὶ πρότασις διαλεκτικὴ καὶ τί πρόβλημα διαλεκτικόν. (*Top.* I 10.104a3-4)¹²

Aristotle explained, in Chapter 4, that the distinction between premise and problem is one of the structure of the sentence. The form of a *protasis* is ‘Is it the case that P?’ (*ara...*). That is, in contrast to *problema*, of which the form is ‘Whether P, or not?’ (*poteron... ê ou;*), the ‘or not’-bit is left out (I 4.101b28-36). There is a doubt expressed both in the premise and in the problem, but it doesn’t bear upon the same thing. In the case of the premise, the doubt is about the consent of the respondent, whereas it is about whether a predicate belongs to a subject in the case of the problem, as Albert explains:

Et nota dubitationis semper debet poni et ordinari ad consensum respondentis, si sint propositiones: si autem sint problemata, ad compositionem propositionis. (*In Top.* 279a)

¹¹ This is an opinion shared by Slomkowski 1997, 10 among many others: ‘All the topoi in the central books are ordered according to these predicables’.

¹² ‘First, then, it should be determined what a dialectical premiss and a dialectical problem are.’ Smith translation

One can note the same difference between dialectical premise and problem. By their very structure they allow only two possible answers: the affirmative or the negative. Aristotle points this out explicitly:

οὐ δοκεῖ δὲ πᾶν τὸ καθόλου διαλεκτικὴ πρότασις εἶναι, οἷον ᾧ τί ἐστὶν ἄνθρωπος; ᾧ ἢ ᾧ ποσαχῶς λέγεται τἀγαθόν; ᾧ ἐστὶ γὰρ πρότασις διαλεκτικὴ πρὸς ἓν ἐστὶν ἀποκρίνασθαι ᾧναίᾳ ἢ ᾧούᾳ· πρὸς δὲ τὰς εἰρημένους οὐκ ἐστὶν. διὸ οὐ διαλεκτικὰ ἐστὶ τὰ τοιαῦτα τῶν ἐρωτημάτων, ἂν μὴ αὐτὸς διορίσας ἢ διελόμενος εἴπῃ, οἷον ᾧ ἄρα γε τὸ ἀγαθὸν οὕτως ἢ οὕτως λέγεται; ᾧ πρὸς γὰρ τὰ τοιαῦτα ῥαδία ἢ ἀπόκρισις ἢ καταφήσαντι ἢ ἀποφήσαντι. διὸ πειρατέον οὕτω προτείνειν τὰς τοιαύτας τῶν προτάσεων. (*Top.* VIII 2.158a14-22)¹³

Thus, in Chapter 10, Aristotle first of all goes back to the definition of the endoxal premise given in Chapter 1, adding to it the condition that the opinions of the ‘wise’ ought not to be paradoxical:

ἐστὶ δὲ πρότασις διαλεκτικὴ ἐρώτησις ἔνδοξος ἢ πᾶσιν ἢ τοῖς πλείστοις ἢ τοῖς σοφοῖς, καὶ τούτοις ἢ πᾶσιν ἢ τοῖς πλείστοις ἢ τοῖς μάλιστα γνωρίμοις, μὴ παράδοξος· θείη γὰρ ἂν τις τὸ δοκοῦν τοῖς σοφοῖς, ἔαν μὴ ἐναντίον ταῖς τῶν πολλῶν δόξαις ἦ. (*Top.* I 10.104a8-12)¹⁴

But it may be more or less easy to ascertain that certain statements seem so to all, to most, to the wise or to the most famous of them. Aristotle therefore adds three characteristics that one could take as signs that certain statements respect this definition of the probable:

¹³ ‘Not everything that is universal seems to be a dialectical premiss, for example ‘What is a human?’ or ‘In how many ways is “good” said?’ For a dialectical premiss is one to which it is possible to answer yes or no, but this is not possible with the premisses mentioned; therefore, such questions are not dialectical unless you give the definition or distinction yourself in stating them, e.g. ‘Is it the case that “good” is said either in this way or in that?’ For in response to things of this sort, it is easy to answer by either assenting or dissenting, and you must therefore try to put forward such premisses in this way.’ Smith translation. See also *Int.* 11.20b25-30: ἅμα δὲ δῆλον ὅτι οὐδὲ τὸ τί ἐστὶν ἐρώτησις ἐστὶ διαλεκτικὴ· δεῖ γὰρ δεδόσθαι ἐκ τῆς ἐρωτήσεως ἐλέσθαι ὁπότερον βούλεται τῆς ἀντιφάσεως μόνιον ἀποφῆνασθαι. ἀλλὰ δεῖ τὸν ἐρωτῶντα προσδιορίσαι πότερον τόδε ἐστὶν ὁ ἄνθρωπος ἢ οὐ τοῦτο.

¹⁴ ‘A dialectical premiss is the asking of something acceptable to everyone, most people, or the wise (that is, either all of them, most of them, or the most famous), provided it is not contrary to opinion (for anyone would concede what the wise think, so long as it is not contrary to the opinions of the many).’ Smith translation

εἰσὶ δὲ προτάσεις διαλεκτικαὶ καὶ τὰ τοῖς ἐνδόξοις
ὅμοια, καὶ τὰναντία τοῖς δοκοῦσιν ἐνδόξοις εἶναι, κατ'
ἀντίφασιν προτεινόμενα, καὶ ὅσαι δόξαι κατὰ τέχνας
εἰσὶ τὰς εὐρημένους. (*Top. I* 10.104a12-15)¹⁵

First of all, therefore, we may also consider as endoxal those statements that resemble endoxal statements. Thus, if it is a probable opinion that the science of contraries is one and the same, it will appear probable also that the sensation of contraries is one and the same. In like manner, if it is a probable opinion that grammar is numerically one, it will also seem probable that the art of flute playing is numerically one, whereas if it is probable that there are many sciences of grammar, it will seem probable also that there are many arts of flute playing. These are examples that Aristotle gives, and he concludes by saying that all these opinions seem to be alike and to belong to the same family :

πάντα γὰρ ὅμοια καὶ συγγενῆ ταῦτ' ἔοικεν εἶναι. (*Top. I*
10.104a19-20)¹⁶

But we may consider endoxal also the contraries of probable statements taken according to contradiction. Thus, if the former is affirmative, the latter is negative and vice-versa. If it is probable, for example, that one should do good to one's friends, then it is also a probable opinion that one should not do evil to them. That one should do evil to one's friends is a statement contrary to common opinion whose contradiction is that one should not do evil to them. We must understand, however, that Aristotle is not speaking about contrariety between the statements, but rather between the terms.

Finally, we may consider endoxal all the opinions that are in agreement with the teachings of the recognized arts. Indeed, we call those proficient in the arts, wise. Albert also thinks that when one uses what seems to the arts, this is because it is a way to get to the probable as what seems to the wise:

Ponet enim aliquis probabiliter (secundum quod probabile est, quod videtur sapientibus et maxime notis) ea quae videntur his quae probati et antiquiores sunt in artibus traditis. (*In Top. 269a*)

¹⁵ 'Dialectical premisses also include: things which are similar to what is acceptable; the contraries of things which appear to be acceptable, put forward by negation; and such opinions as are derived from any established arts.' Smith translation

¹⁶ 'For all these seem to be similar and related.' Smith translation

But why define the dialectical premise by ἐρώτησις? Why not say 'take' or 'assume', which are closer to the act of laying down a premise with a view to syllogizing? This seems to be what Aquinas calls a 'praedicatio per causam', that is to say, a description of a thing by the way one gets it.¹⁷ This is what Aquinas is talking about when he comments on Aristotle's text on the relation between the sciences and their proper principles. Commenting his affirmation that in each science there are proper questions, he says:

Idem est secundum substantiam interrogatio syllogistica et propositio, quae accipit alteram partem contradictionis, licet in modo proferendi differant (hoc enim, quod ad interrogationem respondetur, assumitur ut propositio in aliquo syllogismo). (*In Post. Anal.* I 21#174)

It is clear that what Aquinas sees between the request and the obtaining of a premise is in fact a causal link. In respect to the intriguing affirmation concerning questioning in science, we should perhaps understand it in the context of *particular* sciences both subordinating and subordinated; the principles of the latter, to the degree they are the conclusions of the others, could be asked for. This, at least, is what Aquinas seems to me to be saying.¹⁸ Another possible explanation would be that this is a different meaning of 'question' from what we have in dialectic. The philosopher would not ask which part of the contradiction his interlocutor judges to be the best, but rather if, yes or no, he accepts the proposition formed by one determinate part of the contradiction.

The emphasis on the request by which it is necessary to obtain the dialectical premise puts into evidence its uncertain character, and we shall have to return to this later.¹⁹

What Is A Dialectical Problem. (Chapter 11)

¹⁷ This is how Aristotle makes known the processes of sensation and of understanding in the *De Anima*. We will see, in fact, that he describes them as 'undergoings'. Now, they are not really such; sensation and understanding are the results of undergoing, and again, of undergoing in the broad sense. It is in this way also that what is proposed by the intellect, the true, is said to be a being: 'Ponit alium modum entis, secundum quod esse et est, significant compositionem propositionis, quam facit intellectus componens et dividens. Unde dicit, quod esse significat veritatem rei. Vel sicut alia translatio melius habet 'quod esse significat' quia aliquod dictum est verum. Unde veritas propositionis potest dici veritas rei per causam. Nam ex eo quod res est vel non est, oratio vera vel falsa est' (Aquinas, *In Metaph.* V 9#895).

¹⁸ See *An. post.* I 12. See, among the places where Aristotle says that no science asks for its principles, *Soph. el.* 11.172a15.

¹⁹ Lennox 1994, 56 speaks of 'the interrogative context of dialectic as altering the epistemological status of a statement, whether proffered as an alternative or asserted as an answer'.

At the beginning of Chapter 11, Aristotle tells us that one can seek to resolve a problem either with a view to pursuit and flight, or with a view to knowing, either for its own sake, or for obtaining knowledge that will help with problems of choice or knowledge. The text indeed describes the ‘assisting’ (συνεργὰ) problems as ordered to one of the other two kinds:

πρόβλημα δ' ἐστὶ διαλεκτικὸν θεώρημα τὸ συντεῖνον ἢ πρὸς αἴρεσιν καὶ φυγὴν ἢ πρὸς ἀλήθειαν καὶ γνῶσιν, ἢ αὐτὸ ἢ ὡς συνεργὸν πρὸς τι ἕτερον τῶν τοιούτων, (...) ἔνια μὲν γὰρ τῶν προβλημάτων χρήσιμον εἶδέναι πρὸς τὸ ἐλέσθαι ἢ φυγεῖν, οἷον πότερον ἢ ἡδονὴ αἰρετὸν ἢ οὐ· ἔνια δὲ πρὸς τὸ εἶδέναι μόνον, οἷον πότερον ὁ κόσμος αἰδῖος ἢ οὐ. ἔνια δὲ αὐτὰ μὲν καθ' αὐτὰ πρὸς οὐδέτερον τούτων, συνεργὰ δὲ ἐστὶ πρὸς τινα τῶν τοιούτων· πολλὰ γὰρ αὐτὰ μὲν κατ' αὐτὰ οὐ βουλόμεθα γνωρίζειν, ἑτέρων δ' ἕνεκα, ὅπως διὰ τούτων ἄλλο τι γνωρίσωμεν. (*Top. I 11.104b1-12*)²⁰

In Chapter 14, Aristotle will have this to say about premises and problems:

Ἔστι δ' ὡς τύπῳ περιλαβεῖν τῶν προτάσεων καὶ τῶν προβλημάτων μέρη τρία. αἱ μὲν γὰρ ἠθικαὶ προτάσεις εἰσὶν, αἱ δὲ φυσικαί, αἱ δὲ λογικαί. ἠθικαὶ μὲν οὖν αἱ τοιαῦται, οἷον πότερον δεῖ τοῖς γονεῦσι μᾶλλον ἢ τοῖς νόμοις πειθαρχεῖν, ἐὰν διαφωνῶσιν· λογικαὶ δὲ οἷον πότερον τῶν ἐναντίων ἢ αὐτῇ ἐπιστήμη ἢ οὐ· φυσικαὶ δὲ οἷον πότερον ὁ κόσμος αἰδῖος ἢ οὐ. ὁμοίως δὲ καὶ τὰ προβλήματα. (*Top. I 14.105b19-25*)²¹

Now Smith, while pointing out that his reading of the text is in contradiction with the tradition, suggests that the division of problems in Chapter 14 is really different from that of

20 'A *dialectical problem* is a point of speculation, directed either to choice and avoidance or to truth and knowledge (either on its own or as working in conjunction with something else of this sort) (...) For it is useful to know <the answers to> some problems only for the sake of choosing or avoiding something (for instance whether pleasure is to be chosen or not), while it is useful to know others only for the sake of knowing (for instance whether the universe is eternal or not). Others are, in and of themselves, of no use for either of these but work in conjunction with other things of this sort. For there are many things which we do not wish to know in and of themselves, but for the sake of other things, in such wise that, because of them, we will come to know something further.' Smith translation

21 'In outline, there are three classes of premisses and problems. Some premisses are ethical, some are scientific, and some are logical. Premisses such as these, then, are ethical: whether one must obey one's parents rather than the laws, if they disagree. Logical premisses are such as whether or not the same knowledge has contraries as its object; scientific premisses are such as whether or not the universe is eternal. And similarly also with problems.' Smith translation

Chapter 11. Students of the *Topics* may readily concede that this is opposed to the tradition, since aside from some recent works, such as Brunschwig's commentary (which Smith is obviously following very closely here), interpreters from Alexander through the Medieval commentators such as Albert, and Renaissance scholars such as Pacius (who was familiar with Alexander), do indeed hold these two passages to be identical in the essentials of the divisions they propose of problems and premises into three kinds.

Alexander explains this passage from Chapter 11 by saying that the dialectical problem is a seeking which tends to preference or rejection, or to knowledge, and this either for itself or as a help in some other investigation towards these ends. He then affirms that every problem will be either an ethical consideration, or a physical one, or a logical one, and that this is what the preceding definitions are talking about.²² Thus, according to him, every consideration that is a help to some other consideration will be logical:

ὅσα δὲ μήτε ὡς πρακτικὰ ζητεῖται μήτε τέλος ἔχει τὴν γνῶσιν τῆς ἐν αὐτοῖς ἀληθείας, ἀλλ' ὡς συνεργὰ ἢ πρὸς τὴν τῶν αἰρετῶν τε καὶ μὴ γνῶσιν ἢ πρὸς τὴν τῶν ἀληθῶν τε καὶ ψευδῶν εὕρεσιν ζητεῖται, ταῦτα προβλήματα λογικά· (Alexander, *In Top.* 74.26-29)

Moreover, according to Alexander, every problem about a logical matter is auxiliary. He adds, in fact, that: ἡ γὰρ λογικὴ πραγματεία ὀργάνου χώραν ἔχει ἐν φιλοσοφίᾳ (*In Top.* 74.29-30), and that 'all research carried out in relation to logic is carried out with a view to its utility for philosophy'.²³ These remarks of his are often quoted.

Albert the Great, too, starting with Chapter 11, associates a determinate matter to the problems for which Aristotle then makes clear the goals: moral problems, civil and mechanical ones; physical, mathematical and metaphysical; and logical (*In Top.* 269). And Albert, no more than Alexander, does not seem to foresee that a question other than in the logical order can

²² See *In Top.* 74.3-6: φησὶν οὖν τὸ λεγόμενον 'ζήτησις περὶ θεωρήματος συντείνοντος ἢ πρὸς αἵρεσιν καὶ φυγὴν ἢ πρὸς ἀλήθειαν καὶ γνῶσιν, ἢ αὐτοῦ ἢ ὡς συνεργοῦ πρὸς τι ἕτερον τῶν τοιούτων ζητούμενον'; 74. 11-12: καὶ ἔσται πᾶν μὲν πρόβλημα διαλεκτικὸν θεώρημα ἢ ἠθικὸν ἢ φυσικὸν ἢ λογικόν (τούτων γὰρ δηλωτικὰ τὰ προειρημένα),

²³ ὅσα δὲ κατὰ ταύτην ζητεῖται, τοῦ πρὸς ἐκείνην χρησίμου ζητεῖται χάριν (Alexander, *In Top.* 74.30-31).

constitute an auxiliary problem,²⁴ and he also excludes the possibility that a logical problem might be studied for its own sake. And even if he does not proceed to the division of statements and problems in Chapter 14 by defining each of the subject-matters by the goals enumerated in Chapter 11—this is what Alexander in fact does—²⁵ nonetheless, the words by which he designates the subject-matters are the same as those he has already associated with the goals in Chapter 11. One can find the same division in Pacius.²⁶

Thus, according to these commentators, in *Topics* I, Aristotle is reserving a description of ‘tool’ (that is, something ordered to something else) to logic. And he also reduces the status of any logical debate to an auxiliary one. This very likely nourished the tradition of calling logic a ‘tool’.²⁷ Now, this would be a real problem if one thought that a logical problem need not be auxiliary, or if one thought that those problems that are not being pursued immediately with a view to choice or to knowledge, but rather as aids for the problems immediately pursued with a view to choose or to know, need not be logical. That, in fact, every adjunct problem does not necessarily involve logical matters. This is the case for Smith. Commenting on the passage in Chapter 14, he says:

The ancient commentators interpret the passage against the background of a much later controversy about the place of logic in philosophy. Alexander and other later Peripatetics rejected the Stoic conception of logic as a division of philosophy on a par with theoretical and practical wisdom, maintaining instead that it is merely an ‘instrument’ of philosophy. Thus Alexander (74.11-33) takes the threefold distinction in the present passage to be parallel to the classification of dialectical problems given at I.11, 104b1-5: those useful for truth and knowledge, those useful for choice and avoidance, and those that work in conjunction with something else. Alexander supposes this to be a three-way partition and equates the last group with the logical problems; the study of them will consequently be of no intrinsic value and important only in so far as it contributes to theoretical or practical issues. But the division in I.11 can equally well be read as a double dichotomy: among both theoretical and practical problems, some are

²⁴ ‘Adminiculans autem, sicut id quod est de modo omnis philosophiae: et hoc est logicum secundum quod logica generaliter dicitur omnis scientia sermocinalis, quae in termino determinatur. Omnia ista quaesita ad alia quae per ea scienda referimus’ (Albert, *In Top.* 269b).

²⁵ See Alexander on Chapter 14, *In Top.* 94.2-10.

²⁶ See *In Top.* 358#1 [Chap. 11]. See also 361#6 on Chapter 14.

²⁷ Brunschwig 1967 suggests in turn that the identification of the divisions of Chapters 11 and 14 has nourished this tradition (xxvii, n1), and that this tradition has influenced Alexander’s commentary on these chapters (126n16).

worth pursuing intrinsically while others are important because of their connection with other issues. (Smith 1997, 92)

One can find similar remarks in Brunschwig's commentary on Chapter 11. He says in fact that the 'auxiliary' problems of the first classification do not perhaps constitute a category located on the same level as the two others, but only an interior subdivision to each of them.²⁸ Except that he goes as far as to actually put into doubt not only that every adjunct problem must be logical, but also that every logical problem must be auxiliary:

Influencé par la conception, devenue traditionnelle, de la logique comme instrument (*organon*), Alexandre estime que la présente division correspond à celle des problèmes en éthiques, physiques ou théorétiques, logiques (cf. 105b19-29). Mais il n'est pas certain que tous les problèmes auxquels Aristote attribue ici un caractère "auxiliaire" appartiennent à la sphère "logique"; et il ne l'est pas davantage que tous les problèmes "logiques" soient de caractère seulement "auxiliaires". Aristote ne donne pas ici d'exemple pour les problèmes de caractère "auxiliaire"; mais celui qu'il prend en 105b23-24 pour illustrer la notion de prémisses logiques ("les contraires relèvent-ils ou non du même savoir?") entrerait bien plutôt dans une catégorie de problèmes théorétiques qui sont l'objet commun de la dialectique et de la métaphysique. (Brunschwig 1967, 126n16)

Nonetheless, Brunschwig and Smith are not really the first to break with the traditional reading of Chapters 11 and 14, as a reading of Maurus clearly indicates, for he already proposed that Chapter 11 should be read as a double bipartite division, in contrast with the tripartite division of Chapter 14. In doing so he broke with the previously accepted interpretation—including that of Pacius, whose position he was well aware of. On Chapter 11, he says:

Definit Aristoteles problema definitione divisiva, qua simul explicat varias problematum species. Problema est aliquid contemplationi et disquisitioni propositum, spectans vel ad electionem et fugam, vel ad veritatem et cognitionem, vel per se, vel quia adjumentum affert ad aliquid aliud (...) In hac definitione continentur duae divisiones problematis. Primo dividitur problema in speculativum et practicum. Practicum est, cujus cognitio est utilis ad electionem vel fugam ex gr., hoc problema, quo quaeritur, utrum voluptas sit bonum, est practicum, quia ejus cognitio conduit ad electionem vel fugam voluptatis. Speculativum est, cujus cognitio est solum expetibilis gratia scientiae; ex.gr., hoc problema: an mundus fuerit ab aeterno, est speculativum, quia ejus cognitio est expetibilis gratia solius scientiae. Problema tum speculativum tum practicum potest subdividi in problema, quod per se expetimus scire, cujusmodi sunt duo jam proposita, et quod

²⁸ See xxvii, n1: 'Il se peut en effet que les problèmes 'auxiliaires' de la première classification ne constituent pas une catégorie située sur le même plan que les deux autres, mais seulement une subdivision intérieure à chacune d'elles.'

expetimus scire non propter se, sed quia ordinatur ad sciendum aliquid aliud, quod per se expetimus scire. (Maurus, *In Top.* 403#1-2)

And when he comments on Chapter 14, Maurus gives no indication that he would identify the division that Aristotle is making there of statements and problems with the one he made of the problems in Chapter 11 (*In Top.* 407#3).

This disagreement between the Ancients and the Moderns shows that, although at first sight the division of the problems does not seem to be problematic itself, it is nonetheless difficult to understand well. In fact, does not Aristotle himself affirm that it is not easy to circumscribe by a definition the species mentioned and that one must rather familiarize oneself with them by means of the examples furnished, and by means of induction make oneself able to recognize their differences:

ποῖαι δ' ἕκασται τῶν προειρημένων, ὀρισμῶ μὲν οὐκ εὐπετὲς ἀποδοῦναι περὶ αὐτῶν· τῇ δὲ διὰ τῆς ἐπαγωγῆς συνηθείᾳ πειρατέον γωνρίζειν ἕκαστην αὐτῶν, κατὰ τὰ προειρημένα παραδείγματα ἐπισκοποῦντα. (*Top.* I 14.105b25-29)²⁹

And, as we shall see, although Alexander does not draw the same conclusions from this, the fact that certain moral and natural problems seem to be auxiliary did not escape his attention. He speaks about them as about 'possibilities of exchange in respect to the moral and natural problems'.³⁰

Without entering into the details, let us first ask what the non-logical problems could be that Smith, Brunschwig and Maurus would consider to be auxiliary.

Among the theoretical problems, they affirm, certain of them would be pursued with a view to other problems. It happens in fact that theoretical problems are studied for the sake of

²⁹ 'As for what each of the aforesaid kinds is like, it is not easy to state that in definitions about them, and one must try to recognize each of them with the familiarity which comes through induction, studying them in light of the examples given.' Smith translation

³⁰ See *In Top.* 94.10-14: διὰ δὲ τῶν παραδειγμάτων ἔδειξε τίνες μὲν εἰσιν αἱ ἠθικαί, τίνες δὲ αἱ φυσικαὶ καὶ τίνες αἱ λογικαί. τὸ δὲ ὡς τύπῳ περιλαβεῖν προσέθηκεν, ὅτι μὴ ἔστιν ἀκριβῶς ἀφορίσαντας εἰπεῖν τὰς μὲν 'πρὸς αἵρεσιν καὶ φυγῆν' συντεινούσας ἠθικὰς εἶναι, τὰς δὲ 'πρὸς ἀλήθειαν καὶ γνῶσιν' φυσικὰς· ἔστι γὰρ ἐφ' ὧν ὑπαλλάσσει, ὡς ἐν τοῖς ἐξῆς ῥηθήσεται.

other theoretical problems. For example, one can seek the definition of motion for the sake of understanding generation. But the very fact that one is talking about the first problem as a theoretical one shows that it is principally pursued to know, and that it is not essentially auxiliary. It is, rather, auxiliary in an accidental way. As when someone who has studied a question about the soul in natural philosophy then uses this knowledge to inspire his moral life. The knowledge in no way becomes practical, nor does it in any way enter into a practical syllogism. Its relation to action thus remains purely accidental, however useful. Alexander gives as an example of this the answer to the question whether everything takes place according to an absolute necessity, without which question's being answered, one would not even know if there was any place to speak about choice and ethical problems. But one should note that Alexander does not call the first question 'auxiliary'.

The reason why truly theoretical questions cannot be essentially ordered to practical ones can be deduced from a distinction made by Aquinas in the *Prima Pars* of his *Summa theologiae* where he shows the different ways in which an investigation can be called theoretical, and explains that a question is truly so only if the thing known is natural, that is, if the matter studied is as such inoperable.³¹ It is easy enough to understand that it is accidental for such a question to be studied with a practical purpose in mind; that is, with the intention of reflecting on those practical things for which such a theoretical consideration might be useful, as is the case of studying the soul, or the phenomena of the natural world. It is more difficult to see, however, that it is also accidentally that a question that is not theoretical in the very nature of the things studied, but only according to its mode, might be studied with some other practical problem in mind. (Aquinas gives as an example of something theoretical only according to its mode the person who is analytically studying an artifact by its causes and definition. In fact, this is not a theoretical question, but rather a question that is theoretical only according to its mode. Alexander gives as examples of such practical problems treated analytically, and which do not immediately aim at choice, the questions whether the virtues are connected, and whether pleasure is a continuous movement.) Might it be the case that for our three authors, among these practical problems, the first could be said to be auxiliary when it is pursued with a view to other practical problems? This is what might happen, for instance, when one who has investigated the nature of a house, then passes on to consider housing in relation to the good life.

³¹ See Ia q.14 a.16.

Perhaps the same would hold for those practical problems that are useful for other practical problems, but that are practical also according to their end and mode, such as when one investigates ends, this serves an investigation of means. Let's illustrate this with the virtues. One has to have concluded that truth is a thing to be pursued in order to judge that to acquire intellectual virtues is a good thing. And it is true that if one then wants to determine if some actions are good or not, he will have to look, among other things, to see if they allow one to acquire prudence, understanding and science. Yet, these first practical problems are not always ordered to the second.

Finally, if these authors envisaged the possibility that practical problems can also be ordered to theoretical ones, the same objection arises. For example, to the degree that the moral life influences the resolution of philosophical problems, someone might imagine that a reflection on the nature of virtue, which might contribute to bettering the moral life, is ultimately in the service of philosophy. Yet, a reflection on virtue could obviously be pursued for the sole purpose of practicing it. Thinking of other practical problems that are useful for theoretical ones, someone might also bring up those cases where reflecting on the practical can help theoretical reflection because of analogies between the two. For example, one could use the fact that virtue consists in the medium to reason, by analogy, to the fact that the truth consists in a mean also. In all cases, however, a practical question studied for the sake of the knowledge of something else remains accidentally ordered to it.

Now, it seems to me that when Aristotle is talking about 'auxiliary problems', he must have in mind those questions that are essentially and necessarily always ordered to others, just as he understands by 'problems aimed at pursuit and avoidance' those problems that are essentially and necessarily ordered to action, whether immediately or not, and by 'problems aimed at knowledge in itself' those problems that are in the same way ordered to knowledge. Otherwise, the principle of division would not always be the same. Aristotle would not have spoken about a 'division' of the problems and of the three kinds of problem as 'parts' (μέρη) if the same problem could have the characteristics proper to several classes. (Men in love, fearful men, hopeful ones, sad ones and angry ones do not make up 'classes' of men.) Now, only logical questions are essentially and necessarily always ordered to other questions.

'An auxiliary question' has, therefore, two meanings that must not be confused. Either one wishes to say that a question about some operable thing is, under particular circumstances and by accident, ordered to some other question about operation or even speculation, or that a question about a naturally theoretical matter is, in these same conditions, ordered to another theoretical problem, or even to one which bears on operation. Or, an 'auxiliary question' may

mean one concerning a special kind of operable matter, more precisely, one which can be made in the mind, but in a necessary way. Only here can we have a truly auxiliary problem. Thus, my first objection to this modern interpretation consists in this, that the moral and natural problems which are subordinated to other problems are in truth always only accidentally so, and are not radically auxiliary problems.

But, one might equally object, where would one situate, in the division of the problems according to their purpose as conceived of by Maurus, Brunschwig and Smith, those problems that concern logical matter? It seems that it would be necessary to situate them either among the theoretical problems (auxiliary or not) or in a class other than that of the theoretical and practical problems. Now, the first alternative has as a drawback that it doesn't harmonize with other of Aristotle's texts. He never assigns but three kinds of matter to speculative studies: natural or mobile being, mathematical being and being as being. It is never a question of fixing as one's goal a knowledge of logical intentions for their own sake. On the other hand, the second alternative has as a consequence the manifestly absurd position that no logical problem would be auxiliary.

And this leads me to the other affirmation that goes against the traditional interpretation, namely, that it might prove pertinent to study logical problems in and for themselves. We stated that only logical matter can lend itself to problems that are truly auxiliary. Now, is every logical problem auxiliary? Brunschwig puts this into doubt, using as an example the question of whether contraries are objects of one and the same science. He affirms that we have here a question whose interest is not uniquely instrumental and that seems in fact to pertain as much to metaphysics as to logic.

Once more without entering into too much detail—this is indeed a very difficult question—that contraries are the object of one and the same science is only an opinion in logic and is studied with a view to knowing the mode of knowing and the properties of certain logical intentions; whereas in metaphysics, this is a proper question for the science and will be demonstrated therein, and it is considered with a view to knowing the properties of the kinds of ability and in order to distinguish between the latter. Logic, in fact, studies intentions of the mind insofar as these are ordered to knowing things. Metaphysics, on the other hand, approaches them insofar as they are beings. But as they have very little being, only existing in the mind, Aristotle even excludes them from the being that is the subject of metaphysics (Book VI). These intentions in the mind are therefore only useful in metaphysics insofar as they help to progress towards a knowledge of real beings, and this is possible because logic is general, as is metaphysics, and because our way of knowing reflects aspects of reality. (In Chapter 10

of Book V of the *Metaphysics*, for example, Aristotle establishes that there are ten kinds of being from the fact that there are ten ways of saying that something is an attribute; and he affirms things about real substances and accidents starting with the properties of logical substances and accidents. He is then proceeding *rationabiliter* in the first of the three senses enumerated by Aquinas in his commentary on Boethius *De Trinitate*.) Even in these cases, therefore, logic is always studied only because of its contribution to the discovery of the truth about other things.

Since ethical and theoretical questions are only accidentally auxiliary, whereas logical questions are so essentially, these kinds of auxiliary questions cannot be subordinated to one another in the same way. Now, the closest example of theoretical questions subordinated to others of a different kind is represented in Aristotle by the intermediary sciences such as astronomy or music, where the pure mathematical sciences of geometry and arithmetic are applied to problems in the physical world. Now, this is only possible because these mathematical entities do really exist in physical things, and to the extent that such physical things approach perfection (as Aristotle believed to be the case for the heavenly bodies), the more perfectly mathematical considerations apply to them.

Logic is quite another matter, however. It is not applied to the other sciences because logical intentions are in them, but because logic constructs in a necessary way tools for knowing these things. Besides, Aristotle never speaks of logic in any way similar to the way he speaks of the relations between mathematics and natural science.

The necessity of logic for the sciences comes from the need to furnish tools to reason which studies the objects of these sciences. And it is this necessity for an art of arguments that Plato is referring to in the *Phaedo* when Socrates is discussing the immortality of the soul. He is not suggesting that such an art would be useful because of a likeness to the soul in what it studies. That this is the first allusion in the history of philosophy to the necessity for logic has been suggested by Duane Berquist.

Thus I think that the traditional view is correct, and that the newer interpretation of Maurus, followed more recently by Brunschwig and Smith, may lead to serious misunderstandings of the nature and role of logical problems in relation to the ethical and natural ones, as well as of what role these latter can play in respect to one another.

Having made these distinctions, we can now return to our main theme: just what is a dialectical problem? Aristotle affirms that it is a question which, though understandable to them, is one about which ordinary people have no opinion (they are not more inclined in one

direction than in the other), or it is an opinion contrary to the wise, or where the opinion of the wise is contrary to that of ordinary people, or where the opinion of some of the wise is opposed to that of others, or even where some ordinary people hold one opinion, while others hold another.³² Two other extreme cases also qualify as problems: questions about which there exist contrary arguments. The difficulty here is to know whether the truth lies with one set of arguments or with another opposed one.³³ Finally, we may also consider to be problems those questions about which we have no arguments in one direction or the other, because we consider that they are too difficult (*Top.* I 11.104b14-17).

A thesis is a position that is only considered because some well-known person holds it, or because it seems to be backed by an argument.

θέσις δέ ἐστὶν ὑπόληψις παράδοξος τῶν γνωρίμων
τινὸς κατὰ φιλοσοφίαν, οἷον ὅτι οὐκ ἔστιν ἀντιλέγειν,
καθάπερ ἔφη Ἀντισθένης, ἢ ὅτι πάντα κινεῖται, καθ'
Ἡράκλειτον, ἢ ὅτι ἐν τὸ ὄν, καθάπερ Μέλισσός φησιν
(τὸ γὰρ τοῦ τυχόντος ἐναντία ταῖς δόξαις
ἀποφνημαμένου φροντίζειν εὔηυες): ἢ περὶ ὧν λόγον
ἔχομεν ἐναντίον ταῖς δόξαις, (*Top.* I 11.104b18-24)³⁴

The thesis thus is a view contrary to opinion received by all, as those which were disqualified as dialectical premises in 10.104a10-12. But we now learn that such views hardly qualify as problems: it is no longer a question, in fact, of an opposition between the wise and the people, or even between the wise; one single expert now seems to be in question. Now, as already explained, Aristotle thinks that what everyone accepts is very likely true.

But we must understand that it is the fact that statements really seem to be false to all or to most people that Aristotle takes as an almost certain sign of their falsity. For one often hears

³² See *Top.* I 11.104b3-5: περὶ οὗ ἢ οὐδετέρως δοξάζουσιν ἢ ἐναντίως [οἱ πολλοὶ τοῖς σοφοῖς ἢ] οἱ σοφοὶ τοῖς πολλοῖς ἢ ἑκάτεροι αὐτοῖ ἐναντοῖς.

³³ See *Top.* I 14.104b12-14: ἔστι δὲ προβλήματα καὶ ὧν ἐναντίοι εἰσὶ συλλογισμοί (ἀπορίαν γὰρ ἔχει πότερον οὕτως ἔχει ἢ οὐχ οὕτως, διὰ τὸ περὶ ἀμφοτέρων εἶναι λόγους πιθανούς).

³⁴ 'A *thesis* is: a belief contrary to opinion held by someone famous for philosophy, e.g. that contradiction is impossible (as Antisthenes used to say), or that everything moves (according to Heraclitus), or that what is, is one (as Melissus says). For to take things contrary to our opinions seriously when just any person declares them is silly.) Or: something about which we possess an argument contrary to our opinions' Smith translation

that it is a common occurrence for the opinions of the experts not to appear to be true at first, or even appear to be false, although they are in fact correct.³⁵ Now, this in no way puts into question Aristotle's principle that most of the time what seems so to all is true. The cases brought up here concern particular objects that not everyone has an experience of, and about which, therefore, there really is no common opinion, or at least there should be none. (There may well be common customary or fashionable ways of thinking, however, that pass themselves off as common opinions.)

There are, therefore, two cases where it is worthwhile to examine a paradoxical position, even if it is almost certainly false. (In fact, given that there must be a difference between problem and thesis, and given Aristotle's examples also, I tend to think that what he calls 'thesis' is clearly false.) It is worthwhile examining how a wise person could have got to such a position, and it is useful to be able to solve the argument which seemingly supports it, for this can hardly be a valid one, since what is false can never be deduced from what is true. Besides, Aristotle characterizes the propounders of the example he gives of this kind of argument as sophists:

θέσις δέ ἐστιν ὑπόληψις παράδοξος τῶν γωνρίμων
τινὸς κατὰ φιλοσοφίαν, (...) περὶ ὧν λόγον ἔχομεν
ἐναντίον ταῖς δόξαις, οἷον ὅτι οὐ πᾶν τὸ ὄν ἦτοι
γενόμενόν ἐστιν ἢ αἰδίον, καθάπερ οἱ σοφισταὶ φασιν·
μουσικὸν γὰρ ὄντα γραμματικὸν εἶναι οὔτε γενόμενον

³⁵ This is one of the ways of Bolton 1987, 122-123 ways of showing that the method of inquiry followed in the biological works is not entirely dialectical: 'Reasoning is defined in the *Topics* as dialectical "which reasons from noted opinions (endoxa)", where endoxa are understood to be "things which are accepted by everyone or by most people; or by the wise—either by all of them, or by most, or by the most famous and distinguished". Clearly, new empirical data uncovered by, say, the working expert biologist doing dissections on the members of some heretofore unexamined or improperly examined species could easily fail to fit into any of the sub-classes of endoxa permitted to figure in dialectical reasoning. Aristotle himself makes clear in various places that such a researcher might well arrive at, and use in his theory construction, results which contradict all standing opinions or, more often perhaps, results which have not occurred to anyone before. It might be argued that if this biologist happened to be among "the most famous and distinguished" any of his own opinions, including new observational results, would count as endoxa and his argument based on them as dialectical. But even if Aristotle was assuming this, which is quite unlikely, if our genuine expert biologist with new empirical data were not yet so lucky as to stand among the most acclaimed biologists neither he nor anyone else would be entitled to use his new results in dialectical argument no matter how empirically well-grounded they might be. This, of course, was Aristotle's own standing when he was actually doing much of his biological research. In addition, new information based on reliable eyewitness reports of non-experts in biology—so long as these results are unknown to most people—do not count as endoxa and thus cannot be accommodated in dialectic either'. In my opinion, these remarks of Bolton are correct and we must look in the particular treatises to another method, similar to that of the modern experimental sciences.

οὔτε αἰδίων ὄντα· τοῦτο γὰρ, εἰ καὶ τιμι μὴ δοκεῖ,
δόξειεν ἂν διὰ τὸ λόγον ἔχειν. (*Top.* I 11.104b24-27)³⁶

This is how I formulate the argument that seems to me to proceed from accident:

- a musician is a grammarian;
- now, this musician-grammarian didn't become so, nor is he eternally so;
- therefore we have a being here who has neither become, nor is eternal.³⁷

Consequently, it is false to say that 'everything that is has either become or is eternal', as one generally does.

The conclusion of the argument is clear: "not everything which is either has come to be or is eternal". No one would be inclined to take such a thesis seriously but for the fact that an argument can be constructed in its support. (Smith 1997, 83)

'Constructed' says Smith. A sophistic argument is in fact fabricated. The sophism of the accident comes about because one thinks that whatever is said of a thing is also said of its accidents. Now, the being of musician-grammarian is an accidental one: it's by accident that these two qualities coincide in one subject. One concludes, therefore, that what is said of the individual who is musician and grammarian, namely, either to have become or to be eternal, is also said of the being that *happens* to him.

There are all sorts of controversies as to the exact way in which this argument is presented in the different texts—I do not intend to get mixed up on this—but the

³⁶ 'A thesis is: a belief contrary to opinion held by someone famous for philosophy (...) Or: something about which we possess an argument contrary to our opinions, e.g. that not everything that is either has come to be or is eternal, as the sophists say of the musician who is literate without either having become so or always being so (for even someone who does not think this might <come to> think it because there is an argument.)' Smith translation

³⁷ See Alexander, *In Top.* 80.15-25: οἱ δὲ σοφισταὶ τοῦτο ἀναιρεῖν πειρῶνται διὰ λόγου τινὸς παρεχόμενοί τινα οὔτε αἰεὶ ὄντα οὔτε γεγονότα. λαμβάνοντες γὰρ τὸ τῶν ὄντων τι εἶναι τὸ μουσικὸν ὄντα γραμματικὸν εἶναι δεικνύουσιν ὅτι τοῦτο οὔτε αἰδίων ἐστίν (οὐ γὰρ αἰεὶ ἦν ὁ μουσικὸς γραμματικός, ἀλλ' ἦν ποτε ὅτε οὐκ ἦν), ἀλλ' οὐδὲ γενόμενον· οὐ γὰρ γίνεται ὁ μουσικὸς γραμματικός (...) οὐκ ἄρα τὸ μουσικὸν γραμματικὸν γίνεται· ἐξ ὧν συνάγουσι τὸ οὐ πᾶν ἄρα τὸ ὄν ἢ γενόμενον ἐστίν ἢ αἰδίων. See also Albert, *In Top.* 271b-272a: 'dicimus, quod non omne quod est, vel factum, vel aeternum est, sicut dicunt et probant sophistae instantes sic. Nam musicum esse grammaticum (quod per accidens est factum) nec simpliciter est factum, nec est aeternum.'

commentators are agreed on this, that the argument Aristotle has in mind is almost certainly the one that appears in fuller form in *Metaphysics* VI 2.1026b18-20, and XI 1064b23-6. Aquinas (*In Metaph.* VI 2#1178), moreover, analyses the one in *Metaphysics* VI as a sophism of the accident.

Aristotle ends Chapter 11 by giving two reasons why a statement given in the form of a double question requiring a determinate answer is not necessarily a dialectical problem. Either it is too easy—that is, the person for whom what is or should be evident poses a problem, has either a customary block, or is deficient in sense, and thus any argument given to his intelligence would be useless to make him change his mind—or the problem is too difficult for a simple exercise:

οὐ δεῖ δὲ πᾶν πρόβλημα οὐδὲ πᾶσαν θέσιν ἐπισκοπεῖν, ἀλλ' ἢν ἀπορήσειεν ἄν τις τῶν λόγου δεομένων καὶ μὴ κολάσεως ἢ αἰσθήσεως· οἱ μὲν γὰρ ἀποροῦντες ἴπότερον δεῖ τοὺς θεοὺς τιμᾶν καὶ τοὺς γονεῖς ἀγαπᾶν ἢ οὐ' κολάσεως δέονται, οἱ δὲ ἴπότερον ἢ χιῶν λευκὴ ἢ οὐ' αἰσθήσεως. οὐδὲ δὴ ὧν σύνεγγυς ἢ ἀπόδειξις, οὐδ' ὧν λίαν πόρρω· τὰ μὲν γὰρ οὐκ ἔχει ἀπορίαν, τὰ δὲ πλείω ἢ κατὰ γυμναστικὴν. (*Top.* I 11.105a3-9)³⁸

It is therefore not a question of examining paradoxical opinions:

Πάσας μὲν οὖν τὰς δόξας ἐπισκοπεῖν ὅσας ἔχουσὶ τινες περὶ αὐτῆς περίεργον. πολλὰ γὰρ φαίνεται καὶ τοῖς παιδαρίοις καὶ τοῖς κάμνουσι καὶ παραφρονοῦσι περὶ ὧν ἂν οὐθεὶς νοῦν ἔχων διαπορήσειεν, δέονται γὰρ οὐ λόγων, ἀλλ' οἱ μὲν ἡλικίας ἐν ἧ μεταβαλοῦσιν οἱ δὲ κολάσεως ἰατρικῆς ἢ πολιτικῆς (κόλασις γὰρ ἢ φαρμακεία τῶν πληγῶν οὐκ ἐλάττων ἐστίν). (...) ἄτοπον γὰρ προσφέρειν λόγον τοῖς λόγου μηδὲν δεομένοις ἀλλὰ πάθους. (*Eth. Eud.* I 3.1214b28-1215a3)³⁹

³⁸ 'One ought not to inquire into every problem or every thesis, but only those which someone might be puzzled about who was in need of arguments, not punishment or perception. For those who puzzle about whether one must honour the gods and care for one's parents or not need punishment, while those who puzzle about whether snow is white or not need perception. Nor ought one to inquire into that the demonstration of which is near to hand, or those the demonstration of which is excessively remote. For the former present no difficulty, while the latter present too much for exercises.' Smith translation

³⁹ 'Now to examine all the opinions that any people hold about happiness is a superfluous task. For children and the sick and insane have many opinions which no sensible man would discuss, for these persons need not argument but the former time in which to grow up and alter and the latter medical or official chastisement (treatment with drugs being chastisement just as much as flogging is). (...) it is out of place to apply

Leaving aside, obviously, the two exceptions mentioned above, namely, paradoxical statements, which Aristotle calls 'theses', which are held by those who are illustrious, or which seem to be confirmed by arguments. Thus, it remains true that as a general rule *it would be senseless to take up one's time with opinions contrary to common opinions.*

Nonetheless, as it is only to Dialectic in one of its uses that Aristotle denies the usefulness of examining very difficult problems here in the *Topics*, it seems to me that it is only the too easy problems that can never be considered dialectical. Aristotle says himself, moreover, that certain problems for which we do not have arguments precisely because they are difficult are nonetheless dialectical:

ἔστι δὲ προβλήματα καὶ (...) περὶ ὧν λόγον μὴ ἔχομεν, ὄντων μεγάλων, χαλεπὸν οἴομενοι εἶναι τὸ διὰ τί ἀποδοῦναι, οἷον πότερον ὁ κόσμος αἰδῖος ἢ οὐ· καὶ γὰρ τὰ τοιαῦτα ζητήσκειν ἄν τις. (*Top.* I 11.104b12-17)⁴⁰

And this is what Aristotle does himself.

He argues very often, in fact, dialectically—for and against the contradictory positions that make them up—in respect to very difficult problems. See, for example, Book III of the *Metaphysics* as well as the following books, where he discusses certain problems that have been laid out there, as well as Book I, Chapter 10, of the *De Caelo*, where he argues dialectically in fact about the very question of the eternity of the world. This helps us to see that in the text of 105a7-9, Aristotle is talking about problems that are too difficult *for exercise*. Such problems may very well lend themselves to dialectical consideration when dialectic is ordered to the philosophical sciences, however.⁴¹

reasoning to those who do not need reasoning at all, but experience.' Rackham translation. What is called αἰσθήσις in the preceding text, seems to be called πάθος in this one.

⁴⁰ 'Those are also dialectical problems (...) those about which, because they are vast, we have no arguments, thinking that it is difficult to give the reason why (e.g. whether the universe is eternal or not). For one could also pursue an inquiry about such problems.' Smith translation

⁴¹ Furthermore, at the beginning of Chapter 10, when Aristotle says that not every problem is dialectical, he is only excluding from dialectical problems those questions which are too easy: οὐ γὰρ πᾶσαν πρότασιν οὐδὲ πᾶν πρόβλημα διαλεκτικὸν θετέον· οὐδεὶς γὰρ (...) προβάλοι τὸ πᾶσι φανερόν ἢ τοῖς πλείστοις· τὰ μὲν γὰρ οὐκ ἔχει ἀπορίαν (*Top.* I 10.104a3-7).

The affirmations that dialectical problems must be neither too difficult nor too easy must therefore be qualified. Problems that are too easy may become objects of dialectical discussion when 1) they constitute a problem for a well-known philosopher, or 2) when they appear to be confirmed by arguments. Very difficult problems also, when it is not principally with a view to exercise that they are being discussed.

Alexander claims that the dialectical problem is about two of the four questions whose answers make up our knowledge of things:

καὶ εἴη ἂν τὰ διαλεκτικὰ προβλήματα πάντα ἀναγόμενα εἰς τὴν ζήτησιν τοῦ τε 'ὅτι ἔστι' καὶ τοῦ 'εἰ ἔστιν', ἃ ἔστι δύο τῶν τεσσάρων ὧν εἶπεν ἀρχόμενος τοῦ δευτέρου τῶν ἀναλυτικῶν τῶν ὑστέρων· τὸ γὰρ 'δι' ὅτι ἔστι' καὶ 'τί ἔστιν' οὐ διαλεκτικὰ προβλήματα. (*In Top.* 63.15-19)⁴²

Aquinas, on the other hand, says that dialectic answers to just one:

Dicit ergo primo quod aequalis est numerus quaestionum et eorum quae sciuntur. Cuius ratio est, quia scientia est cognitio per demonstrationem acquisita. Eorum autem oportet per demonstrationem cognitionem acquirere, quae ante fuerint ignota: et de his quaestiones facimus, quae ignoramus. Unde sequitur quod ea quae quaeruntur sint aequalia numero his quae sciuntur. Quatuor autem sunt quae quaeruntur, scilicet *quia*, *propter quid*, *si est* et *quid est*: ad quae quatuor reduci potest quidquid est quaeribile vel scibile. Dividit autem in *I Topicorum* quaestiones sive problemata aliter in quatuor, quae omnia comprehenduntur sub una harum quaestionum, quae dicitur *quia*. Non enim ibi intendit nisi de quaestionibus ad quas dialectice disputatur. (*In Post. Anal.* II 1#408)

At first sight it seems strange that Alexander and Aquinas deny that dialectic is about the question 'what is it?' and that it is only occupied with the question 'whether it is so'. Indeed, all of the dialectical places are ordered to definition; the third and fourth tools also, in particular; and definition answers the question 'what is it?'.⁴²

But if we look more closely, we can understand that the answer to this question has already been given. Among the divers kinds of questions to which Aristotle's definition denies the status of dialectical problem, there are two to be especially noted: questions of definition ('What is X?') and questions of causality ('Why X is Y?'). It is only when a determinate answer is given to such questions formulated in the mode 'Whether Y is the definition of X';

⁴² See *An. post.* II 2.

‘Whether Z is the reason for which X is Y’ that they can become dialectical problems.⁴³ Thus, in dialectic one does not immediately discuss the question of what the definition of a species is, but rather if such and such a predicate is its definition. It is when the question is asked in this way that the places can be useful. For it is by means of questions of the kind ‘whether such a predicate belong to the subject to be defined or not’, and ‘whether it belong to it as a genus or not’ that Aquinas describes in fact the investigation of parts of the definition:

Dicit ergo primo quod ad hoc quod aliquis constituat *terminum*, idest definitionem per viam divisionis, tria oportet considerare: quorum primum est, ut ea quae accipiuntur, praedicentur in eo quod quid est; secundum est, ut ordinetur quid sit primum et quid secundum; tertium est, quod accipiantur omnia quae pertinent ad quod quid est, et nihil eorum praetermittatur. Deinde (...) ostendit quomodo tria praedicta possunt observari (...) Primo ostendit quo modo observetur primum: et dicit quod unum horum (scilicet quod accipiantur ea quae praedicantur in eo quo quid est) observatur, primo quidem per hoc quod homo potest inducere syllogismos quod id quod assumitur insit, sicut cum disputatur ad problema de accidente; secundo, ut ostendatur quod praedicatur in eo quod quid, per ea quibus disputatur ad problema de genere. (*In Post. Anal.* II 15#547-548)

THE SUBJECTIVE PARTS OF THE DIALECTICAL ARGUMENT: SYLLOGISM AND INDUCTION (CHAPTER 12)

Aristotle presents the kinds of dialectical argument. Having defined the syllogism in Chapter 1, he now defines induction and gives an example of it:

Διωρισμένων δὲ τούτων χρὴ διελέσθαι πόσα τῶν λόγων εἶδη τῶν διαλεκτικῶν. ἔστι δὲ τὸ μὲν ἐπαγωγή, τὸ δὲ συλλογισμὸς. καὶ συλλογισμὸς μὲν τι ἔστιν, εἴρηται πρότερον. ἐπαγωγή δὲ ἢ ἀπὸ τῶν καθ’ ἕκαστα ἐπὶ τὸ καθόλου ἔφοδος· οἷον εἰ ἔστι κυβερνήτες ὁ ἐπιστάμενος κρᾶτιστος, καὶ ἡνίοχος, καὶ ὅλως ἐστὶν ὁ ἐπιστάμενος περὶ ἕκαστον ἄριστος. (*Top.* I 12.105a10-16)⁴⁴

Then he proceeds to compare the two kinds of argument:

⁴³ See Brunschwig 1967, xxv, n5.

⁴⁴ “With these things defined, then, we need to distinguish how many kinds of dialectical argument there are. One kind is induction, another is syllogism. Now, what a syllogism is was explained earlier. Induction, however, is proceeding from particulars up to a universal. For instance, if the pilot who has knowledge is the best pilot, and so with a charioteer, then generally the person who has knowledge about anything is the best.” Smith translation, modified. Broadly similar definitions are present or implicit in I, 18, 108b10-11; VIII, 1, 156a4-6; *APo* I, 1, 71a8-9; *Rhet.* I, 2, 1356b14-15.

ἔστι δ' ἢ μὲν ἐπαγωγὴ πιθανώτερον καὶ σαφέστερον καὶ κατὰ τὴν αἴσθησιν γνωριμώτερον καὶ τοῖς πολλοῖς κοινόν, ὁ δὲ συλλογισμὸς βιαστικώτερον καὶ πρὸς τοὺς ἀντιλογικοὺς ἐνεργέστερον. (*Top.* I 12.105a16-19)⁴⁵

This corresponds to the advice given in *Topics* Theta 14.164a12-13:

τὴν δὲ γυμνασίαν ἀποδοτέον τῶν μὲν ἐπακτικῶν πρὸς νέον, τῶν δὲ συλλογιστικῶν πρὸς ἔμπειρον.⁴⁶

And in 2.157a18-21:

χρηστέον δ' ἐν τῷ διαλέγεσθαι τῷ μὲν συλλογισμῷ πρὸς τοὺς διαλεκτικοὺς μάλλον ἢ πρὸς τοὺς πολλοὺς, τῇ δ' ἐπαγωγῇ τούναντίον πρὸς τοὺς πολλοὺς μάλλον.⁴⁷

The genus of induction in Greek is ἔφοδος, which means a way towards, or a means of reaching. Induction is a way to the beginnings of the philosophical disciplines which explain by causes, and hence is connected with the usefulness of dialectic for the beginnings of such knowledge. Induction like syllogism or statement or definition does not first name an act, but a tool whereby an act is possible or is perfected.

In the definition of induction, τὰ καθ' ἕκαστα can signify either singulars or the less universal, and καθόλου can signify either universal or more universal. τὰ καθ' ἕκαστα should probably be understood first as singulars and καθόλου as universal, even though there might be a later induction from the less universal to the more universal. When Aristotle says that induction is κατὰ τὴν αἴσθησιν γνωριμώτερον, he would seem to have in mind singulars which are known by sense, as in the following:

ἄλλον δὲ τρόπον τὸ τῇ γνώσει πρότερον ὡς καὶ ἀπλῶς πρότερον. τούτων δὲ ἄλλως τὰ κατὰ τὸν λόγον καὶ τὰ κατὰ τὴν αἴσθησιν. Κατὰ μὲν γὰρ τὸν λόγον τὰ καθόλου

⁴⁵ 'Induction is more persuasive, clearer, more intelligible in the way perception is, and commonly used by the public; syllogism is more coercive and more effective with those skilled in contradicting.' Smith translation, modified.

⁴⁶ 'Exercise with those apt at induction should be assigned to a beginner; exercise with those apt at syllogism to someone experienced.' Smith translation, modified.

⁴⁷ 'When arguing, use syllogism with those skilled in debate more than with the public; contrariwise, use induction more with the public.' Smith translation, modified.

πρότερα, κατὰ δὲ τὴν αἴσθησιν τὰ καθ' ἕκαστα. (*Metaph. V* 11.1018b29-34)⁴⁸

Besides, Albert speaks of 'singularia' here.⁴⁹

But Aristotle's example of induction is one from the less universal to the more universal. And the dialectician can induce in this way as well as from singulars. Hence, one might translate Aristotle's definition as *a way towards the general from particulars* because 'particular' can mean singulars or the less universal and 'general' can mean universal or more universal. Le Blond, who also asked this question, answers it clearly:

La première question qui se pose à propos de cette définition, porte sur le point de départ du raisonnement inductif: faut-il entendre, en effet, ce «particulier» dont part l'induction, comme étant la sensation elle-même, la connaissance de l'individuel? Faut-il y voir une connaissance déjà générale, celle qui atteint l'espèce, par exemple? Les termes de καθ' ἕκαστον, d'ἄτομα par lesquels A désigne le point de départ de l'induction, ont souvent ce sens d'«individuel». C'est ce sens qui est voulu évidemment, en certains passages des *Topiques*. Et c'est en s'appuyant sur ces passages qu'Alexander d'Aphrodise assure que l'induction part de la sensation elle-même. Mais, en d'autres endroits des *Topiques*, ἄτομον ou καθ' ἕκαστον désignent évidemment, non les individus, mais les «espèces dernières»: Aristotle recommande formellement de ne pas faire porter l'examen sur les «indéfinis», apeira mais sur les eidh. Et la plupart des exemples d'induction donnés dans les *Topiques* ne recensent pas, en effet, des individus, mais des espèces sous des genres subordonnés, des universels, moins étendus. (Le Blond 1939, 31-32)

⁴⁸ 'but in another sense that which is prior in knowledge is treated as absolutely prior; and of things which are prior in this sense the prior in *formula* are different from the prior in *perception*. Universals are prior in formula, but particulars in perception' Tredennick translation. See Aquinas, *In Metaph. V* 13#946-947: 'Ostendit quomodo aliquid dicitur prius altero in cognitione (...) Sed, cum cognitio sit duplex, scilicet intellectus vel rationis et sensus, aliter dicimus aliqua priora secundum rationem et aliter secundum sensum. Ponit autem tres modos, secundum quos aliquid est prius ratione sive cognitione intellectiva; quorum primus est secundum quod universalia sunt priora singularibus, licet in cognitione sensitiva accidat e converso. Ibi enim singularia sunt priora. Ratio enim est universalium, sensus autem singularium.'

⁴⁹ See Albert, *In Top.* 273-274.

CHAPTER FOUR

THE DIALECTICAL TOOLS: THE STATE OF THE QUESTION

The first thing we must note is that the commentators on the *Topics*, as well as those who wrote on dialectics under its inspiration, have rather seriously neglected the tools. Some of these Aristotelians do not even mention them; among these are Cicero and Boethius. And authors as prolix as John of St. Thomas, Franciscus Toletus or Pedro da Fonseca simply leave them out of their considerations of dialectics. Closer to us in time, Giorgi Colli does the same. Others attempt to account for the place of the tools in the *Topics*, but usually they are content to paraphrase Aristotle, and although in some of them, such as Alexander, there are detailed examples of the use of particular tools, there is little effort spent on trying to explain what they are. This applies not only to Alexander, but also to Albert, Pacius and Maurus. Finally, some, bothered by this doctrine, seek to put them aside rather than trying to explain them and their role. This is the case for Thionville, who considers the teaching on the tools as, 'l'intermédiaire par lequel a passé le génie d'Aristote pour arriver à son but définitif', which are the places (1965, 91).

Why this neglect? Perhaps the commentators saw that the rest of the work can be understood without the teaching on the tools, is Thionville's suggestion (1965, 47). Pelletier's hypothesis is more interesting. He suggests that this neglect of the tools might be due to 'la magie formelle dont l'idée d'une méthode universelle de discussion fait naître l'espoir: l'aptitude à discuter de tout *sans avoir à connaître matériellement le sujet*. De là, une attention exclusive à l'énumération des lieux, centrée sur la forme' (1991, 323).

Whatever the case might be, none of these are the best reasons for having skipped over the tools, for there are others, in fact. As Smith remarks, Aristotle only devotes a few chapters to the tools, whereas the places occupy many books. Whence the temptation to believe that he attached a proportionately lesser importance to the former:

Since these [topoi which have given the *Topics* its name] occupy by far the largest part of the treatise, commentators have been much exercised to fill in the gap left by Aristotle's reticence and to answer the closely related question just what a *topos* is. (1997, 87)

Moreover, Aristotle is extremely concise: nowhere does he strictly define the dialectical tool (he always describes it by its function of procuring abundance), and he hardly touches upon its relation to the places. 'Les *Topiques* sont difficiles, non pas tant par ce qu'ils disent que par ce qu'ils ne disent pas', De Pater remarks, quite appropriately (1965, 151).

In the course of my exposition of the tools following my examination of the major opinions, I will return to certain of these, but mostly with reference to very detailed points. Thus, I will first proceed to a brief presentation of the diverse points of view separately.

ALEXANDER, ALBERT, PACIUS, MAURUS

Alexander has to his credit that he does not confuse the tools with the places, and he conceives of the former as abilities ordered to obtaining probable premises. There is, however, little reflection and analysis concerning the relations between the four tools, what they have in common, and in what they differ. But his paraphrase, the most elaborate one among the Ancients, is of interest. His explanation of the places for the second tool is particularly useful, I find.

With Albert also, one finds very clearly the distinction of places and tools, as well as the idea that these latter are abilities ordered to the obtaining of probable premises. But we hardly find any more attempt to explain than in Alexander. Furthermore, his paraphrase is less useful than the Greek's, since it is less developed and is marked by the difficult style of its author (along with the imperfections of the old Borgnet edition.)

Pacius and Maurus, our best Renaissance commentators on the matter, distinguish place and tool, as did the Greeks. Nonetheless, nowhere in their texts could I find any reference to the generic nature of the tools. Their common end, which is easier to see, is noted. There is really little analysis to be found. But Maurus is sometimes useful because of the clarity of his presentation; Pacius, because of the penetration and the originality of certain of his remarks.

THEODORUS WAITZ (1846)

Theodorus Waitz' text presents all the signs of boredom we will find later in Brunschwig's; Waitz speaks of the *Topics* as if the whole work were hardly more than a long enumeration (430),¹ which he explains by the practical purpose of the work, and this is rather surprising, since Aristotle often uses this very purpose to justify his own brevity (*Top.* I 1.101a18; 14.105b25). Whatever the case, Aristotle's absence of brevity in the *Topics* is the reason given by Waitz to explain why his commentary on this work is briefer than on the others. It is, in fact, quite brief, and involves no effort to explain the text. Waitz is content to repeat that the tools allow an abundance in syllogisms. He does not try to determine a common definition.

EUGÈNE THIONVILLE (1855)

Thionville begins his explanation of the tools by announcing that this part (Chapters 13-18) will be more difficult than have been the three other principal points of Book I (the goal and the usefulness of the work; four species of dialectical questions; two methods for arguing) that he has just seen, and that it contains a doctrine that has always remained very obscure.

The author is confusing the tools with the places:

Les instruments dialectiques, suivant les paroles de l'auteur, sont des moyens, des procédés destinés à nous fournir en abondance des syllogismes et des inductions. Mais ces paroles sont embarrassantes; car il semble que ces procédés et ces moyens doivent être les lieux eux-mêmes. Cependant, dans la théorie du premier livre, il n'est pas encore question des lieux, mais seulement d'une sorte de méthode générale qui paraît leur servir de préambule. (Thionville 1965, 47)

Starting with these observations, Thionville will be led to conclude that the tools are an intermediary step through which Aristotle passed in order to arrive at his definite goal, which was the places:

Les instruments ne sont qu'un système transitoire, un acheminement vers la doctrine définitive. (1965, 53)

This is how, in fact, he puts Aristotle 'd'accord avec lui-même'. For, Thionville, holding as he does that the places and the tools have the same function, can not find any place for the latter in

¹ See Brunschwig, 1989, 499. Le Blond 1939, 22 speaks of the 'méandres des *Topiques*'.

the treatise, unless one looks at it in terms of its evolution. Thus, according to Thionville, Aristotle is faithful in the *Topics* to his custom of explaining things as he discovered them by making us go through the steps which lead to his conclusion.

Thionville's conception of the tools depends upon his conception of the places, and this is the way he wanted it, choosing to study the nature of place before Book I. Now, like many others, he makes no distinction between dialectical premise and dialectical place (or maxim). In fact, he describes the places the way Aristotle speaks of the object of the first tool and affirms that the common places are propositions expressing the most universal probable truths, and that these propositions are the elements of all dialectical reasoning.

Aristote a voulu appeler topoi des vérités premières admises par tout le monde, confirmées par la conscience et le sens commun. Comme la démonstration procède des axiomes nécessaires, la dialectique procède des axiomes² probables, c'est-à-dire des lieux. (Thionville 1965, 35)

He thinks that if we were able to bring back all the principles of our arguments to their most general and simple expression, we would be bringing them back to a limited number of propositions that it would then be possible to study; and this would be the places. They are, in fact, according to Thionville, the results of the method of the tools, generalized.

Mais quel rapport y a-t-il entre cette théorie [celle des instruments] et celle des lieux communs? Ne semblent-elles pas poursuivre toutes deux le même objet? Nous avons prouvé, d'après Aristote et les péripatéticiens, que les lieux communs sont les idées générales adoptées comme vraies par l'humanité, et où nous puisons, comme d'une source commune, les propositions qui forment les prémisses de nos raisonnements. Or le premier instrument dialectique a précisément pour but de tirer de ces mêmes vérités générales, de ces mêmes idées probables qui constituent le domaine des opinions humaines, des propositions applicables à ce que nous voulons démontrer. On peut en dire autant des trois autres instruments; car leurs procédés divers aboutissent toujours à la découverte d'une proposition probable qui doit entrer dans le raisonnement. Il s'ensuivrait donc que les instruments seraient destinés à jouer le même rôle dans la topique que les lieux communs et à nous procurer ce que nous fournissons déjà ces derniers. Par conséquent l'une ou l'autre de ces deux méthodes serait inutile. Car, si nous connaissons les lieux communs, nous y trouverons toutes les propositions dont nous avons besoin pour raisonner, et nous n'aurons que faire alors des instruments. De même si nous possédons bien

² We must understand that by 'axioms', Thionville does not mean the very first principles that for Aristotle are contracted in demonstration. Thionville is talking about propositions that enter directly as such into the argument: 'ce sont les vérités démontrées d'abord, et sur lesquelles s'appuient ensuite un grand nombre de théorèmes. En géométrie par exemple, ce sont des propositions de ce genre: *Tous les angles droits sont égaux; —Le périmètre enveloppant est plus long que le périmètre enveloppé*' (1965, 31).

la méthode des instruments, si nous savons faire jouer à volonté les ressorts de ce savant mécanisme, nous pourrons aussi, par ce moyen, nous procurer toutes les prémisses de nos raisonnements, et l'étude des lieux communs sera superflue. (1965, 51-52)

Nonetheless, I believe that it is more in keeping with Aristotle's teachings to speak of the place as a description of the form of the argument, of the ties that exist between its terms and which assure its validity:

Le lieu dialectique est la conséquence, en matière d'attribution, qui découle, pour une notion, de ce qu'elle soit admise comme définition, cause, accident, semblable ou contraire. Il consiste en des alliances conceptuelles que permet ou que défend à une notion le fait d'une précédente relation endoxale avec une autre. Pour conclure avec une définition stricte, le lieu dialectique est une affinité d'attribution attachée aux corrélatifs d'une relation logique. (Pelletier 1991, 275-276)

It is impossible to go into any detailed and complete considerations concerning the nature of the places here. I think that Pelletier has sufficiently covered this, and I refer the reader to Chapter 7 of his book.

Thionville also does not make any effort to define tool. He keeps 'means' when speaking about them:

Il résulte de ce que nous avons vu que les instruments dialectiques sont quatre procédés pour chercher les éléments de nos preuves, en un mot, quatre méthodes particulières d'invention. (Thionville 1965, 51)

Thionville, however, does devote more space to the tools, and he explains them better than the previously mentioned commentator. For instance, he brings out more clearly certain notions that seem to me to be correct and important:

Les quatre instruments dialectiques ont donc pour but commun de nous procurer les propositions dont nous avons besoin. (Thionville 1965, 48)

JEAN-MARIE LE BLOND (1939)

Le Blond sees, as we do, a certain order from the more general to the more particular between the first and second tools:

Le premier de ces organa est assez peu précis, mais Aristote illustre la recommandation très générale de bien "choisir les propositions" par des moyens plus particuliers: le choix doit se guider sur l'opinion; des propositions ouvertement reçues par l'opinion commune, on peut passer à des propositions semblables, à celles qui leur sont contraires, etc. Plus

précise déjà, est la recommandation de distinguer les significations. (Le Blond, 1939, 38)

But, in point of fact, he sees things quite differently, for it seems to him that the tools are more general than the places. Nonetheless, like many others, he does not distinguish them:

Il est assez difficile d'indiquer une différence bien précise entre les ὄργανα et les τόποι, et Aristote cite, parmi les ὄργανα telle ou telle recette qui revient dans l'étude des τόποι. (Le Blond, 1939, 38)³

Much of what he says is a witness to this. For example, about places he affirms that they are a universal method that gives the means for finding ideas about any subject and how to ask questions on something about which one has no particular competence (1939, 40).

In his work one does not find any attempt to define: he simply takes Aristotle's description and speaks of the tools as 'means of investigating', but which are much more general than are the places, during the consideration of which Aristotle 'entre dans le détail des moyens plus particuliers' (1939, 40).

EDMUND BRAUN (1959)

Braun, in his often cited doctoral dissertation, *Zur Einheit der aristotelischen 'TOPIK'*, does consider the tools in more detail than most modern authors. His analysis of them is in keeping with his general thesis about the central place of the dialectical syllogism in understanding the nature and unity of the *Topics*, which has as its rather immediate function that of procuring such arguments. It is in this context that we would naturally seek the new light that he wishes to throw upon such central parts of the work as the tools and the places, but his reading of the Aristotelian text brings little, finally.

It is difficult to see how, for instance, he distinguishes the tools from the places. The only definition he gives of the tools is more or less Aristotle's own: 'The means which help us to find syllogisms are, according to the First Book of the *Topics*, only the four tools: the first, which determines the statements for the inference process, the second, which distinguishes the many meanings of the words in the statements, the third, which discovers the differences of the

³ Le Blond 1989, 38 cites Grote 1880, 283: 'Il faut avouer que lorsqu' Aristote en vient à spécifier la manière suivant laquelle les trois derniers des instruments peuvent servir, il se rapproche considérablement du détail et de la particularité des lieux'.

concepts, the fourth, which uncovers their agreement' (1959, 71).⁴ There is one noteworthy addition, however, since Braun has inserted the word 'nur' ('only') that is not in the Greek text, which reads: τὰ δ' ὄργανα δι' ὧν εὐπορήσομεν τῶν συλλογισμῶν ἐστὶ τέτταρα (I 13.105a21-22). This amounts to an unjustified exclusion of the places as sources for syllogisms and certainly does not help us to understand how Braun sees the relation between the tools and the places. It seems to be the inverse of what we saw already of Smith's position.

The relations he sees between the tools is something that we will come back to later.

W.A. DE PATER (1965)

De Pater's work, in which Pelletier 1991, 322 noted a proper attention to the tools for the first time among the moderns,⁵ is much more important and profound than what we have previously examined. In spite of certain weaknesses in his treatment of the order of the *Topics* and of the nature of the syllogism already pointed out by Pelletier, and to which I will not return, De Pater's interpretation of the places and the tools is, as Pelletier noted, by far the most faithful and brilliant (Pelletier 1991, 19).

First of all, he carefully examines the question raised by Thionville about the relation between the places and the tools. Reading *Topics* I 13-18, he admits, it is tempting to identify the *organa* with the *topoi*, especially with the proper ones, since they have an extra-logical content:

Les instruments sont, selon ces chapitres, des moyens pour faire des propositions, étant eux-mêmes "d'une manière ou d'une autre" des propositions; ils nous procureront des syllogismes, même en abondance; les syllogismes se font par leur moyen. Les mêmes choses pourraient être dites des lieux. (De Pater 1965, 181)

But De Pater furnishes some clues to put us on the right track. Among others, the places are much more numerous than the tools. Their probability, at least for the common ones, is much

⁴ W. Murray translation: 'Die Mittel, die uns die Syllogismen finden helfen, sind nach dem ersten Buch der Topik nur die vier Organa: das erste, das die Sätze für den Schlußprozeß ermittelt, das zweite, das die mannigfachen Bedeutungen der Worte in den Sätzen unterscheidet, das dritte, das die Unterschiede der Begriffe auffinden, das vierte, das ihre Übereinstimmung aufdeckt.'

⁵ See De Pater 1965, 151: 'Le sens méthodologique des instruments a échappé aux commentateurs des *Topiques*.'

greater than that of the propositions found with the help of the tools which have an extra-logical content. Furthermore, the tie between tool and proof seems to be looser than that between place and proof. (If one reads, for example, *Topics* I 14 and *Rhetoric* II 22, one has the strong impression that it is a matter of studying each subject independently of a demonstrative context. (1965, 134)) Finally, there remains the possibility that in *Topics* I 18.108b33, the tools are said to be useful for the places.

Having supposed that both tools and places (as 'research formulas') serve to find propositions, he warns us that it will depend on the way the research is carried out and on the character of the propositions found whether the places are identical or not with the tools. After which, he shows that the place, even though it guides the choice of propositions pertinent to the subject, still does not judge of their endoxality and is, therefore, insufficient for furnishing the content of the argument. He does so by means of a clear example: the terms of a given proper place constitute the major premise of an argument aiming at determining whether the major term belongs to a subject. It remains that one must take as probable that this subject falls under the middle term. And the place itself is incapable of responding to this question, explains De Pater in order to put into perspective the necessity of the tools:

Prenons comme exemple le lieu propre qui dit (*Top.* 117b18-29): "Est préférable ce qui est plus difficile." Supposons qu'on ait posé la question de savoir s'il est préférable d'être riche ou d'être vertueux. Dans la perspective du lieu cité, la question devient: "Est-il plus difficile d'être riche ou d'être vertueux?" Le lieu n'en dit rien. C'est la méthodologie du premier instrument qui indique comment on peut se renseigner sur une telle question: elle mène l'enquête pour recueillir les opinions courantes sur chaque question (c'est là, comme on sait, le domaine de la dialectique: le probable). Cette recherche, faite à l'aide du premier instrument, mène par exemple à la proposition qu'il est plus difficile d'être vertueux que d'être riche. Ainsi la question posée a reçu une réponse. (1968, 181-182)

De Pater, therefore, clearly distinguishes the tool, which furnishes the data, and the place, to which he attributes a tie to the choice of certain of the data furnished:

Fondamentalement le lieu est, en effet, une loi de l'inférence (...) une proposition qui détermine quelle donnée entre dans la preuve dont elle est la formule d'inférence, dotée d'une certaine généralité, c'est-à-dire sans limitation à cette preuve même. Le lieu est à la fois une formule de recherche et une formule probative (...) On peut donc conclure (...) que la fonction informatrice de l'instrument est plus directe que celle du lieu: l'instrument sert à trouver les données, tandis que le lieu détermine le choix des données acquises ou à acquérir. (1968, 184)

Thus for De Pater, as for Pelletier, one must distinguish between the judgment on the endoxality of the propositions, which is an act proper to the tool, and the judgment on their

pertinence as premises with respect to some given conclusion, which is guided by the place. This distinction runs the risk of going unnoticed, especially when the investigation of the data has not been carried out prior to the presentation of a determinate problem. Indeed, both for De Pater and for Pelletier, the instrumental investigation can and should ideally be carried out well before a determinate problem comes along, but it can take place after also:

Quand on construit ce syllogisme, l'existence des données est, d'habitude, déjà supposée (car il faut en faire des listes, comme le dit I, 14, 105b13-15); si l'on n'en dispose pas, on remplit la lacune pendant la discussion ou quand on la prépare, toujours au moyen des instruments. (De Pater 1965, 133)⁶

De Pater, moreover, points out that in *Topics* VIII 14.163b17-22, Aristotle advises his readers to stock up on definitions, which seems to mean that it is still a question of many eventual objects, as he also says in *Rhetoric* II 22.1396b3-8, that with a view to whatever may come up one must have on each subject a ready-made choice of propositions. And for those questions that come up unexpectedly, one must investigate according to the same method, that is to say, not considering what is indeterminate, but what is pertinent to the subject at hand.

This distinction of tools and places obviously makes it possible for De Pater to better evaluate the necessity of the tools for dialectic:

les instruments nous procureront en abondance des arguments: ils le font en livrant la matière de ces arguments, à savoir les données. C'est là leur utilité. Sans eux, le lieu ne prouve rien, car il n'a pas de contenu. (De Pater 1965, 138)

Not only does De Pater distinguish these two pillars of the dialectical method, but he explains their relations so well that it is worthwhile reproducing another of his examples. This one is built around the place according to which 'if an accident that has a contrary has been posited as belonging to a subject, it is necessary to examine whether it can also receive the contrary of this accident, since the same thing is apt to receive contraries' (*Top.* II 7.113a33-35):

Quelqu'un a posé que l'ignorance réside dans la partie appétitive de l'âme. Le lieu dit qu'une même chose est susceptible des contraires. Il faut donc voir (...) si le sujet posé peut recevoir également le contraire de l'accident

⁶ See also De Pater 1968, 186-188; 1965, 137-139. See Pelletier 1991, 327-8. Evidently, like every unprepared operation, the improvised instrumental inquiry is less easy: οὐ γὰρ ῥάδιον ἐκ τοῦ παραχρῆμα τῶν χρησίμων πρὸς τὸ προκείμενον πρόβλημα προτάσεων εὐπορεῖν μὴ προπαρασκευασμένον (Alexander, *In Top.* 92.24-26).

posé. En d'autres termes, il faut voir si la partie appétitive de l'âme peut recevoir la science. Le lieu ne dit pas ce qu'il en est, mais la méthodologie du premier instrument nous apprend comment faire l'inventaire d'opinions courantes; elle nous enseigne à rédiger une sorte de fichier systématisé, par lequel on possède un grand nombre de données sur tout sujet possible de discussion. Le lieu détermine à la lumière du problème posé, quelle donnée il faut choisir dans ce fichier: celle qui concerne à la fois la faculté appétitive de l'âme et le contraire de l'ignorance (...) Les instruments nous aident à trouver des propositions (premier instrument), à distinguer les différentes acceptions d'un terme (deuxième instrument) et à découvrir les différences réelles ou les ressemblances (troisième et quatrième instruments). Dans notre exemple on se sert du premier instrument pour arriver aux données. Nous supposons qu'on possède un nombre plus grand de données que celles qu'on emploie dans l'argument. On peut donc dire qu'on fait, en argumentant, un choix parmi les données; ce choix s'opère en vertu du lieu (...) Ce choix fait, le lieu fonctionne comme garantie de l'inférence. (De Pater 1968, 186-188)

In the section of his book where he ends the consideration of the state of the question and identifies the remaining problems, De Pater affirmed that, 'Une chose qui n'a été expliquée presque jamais est la fonction des instruments. On aimerait pourtant savoir quelle est la relation entre l'instrument et le lieu' (1965, 100). De Pater has indeed certainly greatly helped to improve this situation.

Another contribution of De Pater is that he is, to my knowledge, the first of the moderns to have attempted an 'essential' definition of the tools, to speak as Pelletier does. De Pater no longer just speaks of the tools as 'means for abundance', but as abilities.⁷ The same as all of dialectic, in fact. Still, he makes use of the expressions 'ability' and 'methodology' in a rather confused way, attributing them in turn to dialectic without bringing in any distinction:

Il reste encore une question importante, à savoir si l'instrument est un pouvoir, une faculté, ou bien un système de règles (...) La situation nous semble être celle de toute la dialectique aristotélicienne. Les Topiques, en effet, ne sont pas une provision statique de lieux: ils visent à faire acquérir une méthode, en l'occurrence une méthode d'argumentation. Ainsi la dialectique est-elle une *dunamis* permettant d'argumenter, comme le dit *Rhet.* 1356a33, mais elle reste une méthodologie, donc un système de lois et de règles. (De Pater, 1968, 184)

Are we to understand that one and the same thing can be both natural and acquired? I don't think that this is what De Pater means, but that he has made a bad choice of words. He is opposing 'rules', 'art' and 'methodology' to '*dunamis*', which he is taking as a synonym for

⁷ See 1968, 184-185; 188.

'method'. For De Pater, the rules seem to be extrinsic to the agent and, as it were, unable to do anything, 'static', whereas the method and the ability give a capacity for acting. In this sense of 'dunamis' it is indeed possible for one and the same thing to be rule, methodology, and *dunamis* or method. One subject can in fact receive rules that permit him to act. But taking *dunamis* in its proper sense, one and the same thing cannot be simultaneously *dunamis* and method. De Pater probably realized that when we speak of 'dialectic' we can mean both a natural, innate talent and an art, but did not further see that 'dialectic' is then analogous. Pelletier, moreover, criticizes him for this:

L'élaboration de cette méthode [la méthode dialectique] présuppose la possibilité naturelle de l'opération qu'elle entend perfectionner, et une capacité naturelle de la raison à la poser, plus ou moins maladroitement. Et le plus radicalement, la dialectique c'est ce pouvoir naturel. L'interprète qui l'oubliera s'empêtrera dans des énoncés apparemment contradictoires qu'il ne verra pas le moyen de réconcilier: la dialectique est innée, la dialectique est acquise. (Pelletier 1989, 3)

And Pelletier gives two examples, among which the above passage in which De Pater affirms that dialectic is a *dunamis* that enables us to argue, and at the same time a methodology.⁸

Moreover, in the conclusion of his article published after his book (to which, in fact, he refers), where one would expect more precision and maturity of thought, De Pater disappoints us. He speaks of 'abilities' and of 'actions', thus attenuating the impression that he wanted to show that the tools are abilities; the preceding confusion was less compromising to the degree that it involved an identification of two kinds of ability. But now we seem to really be falling back into a determination about whether the nature of the tool is to be an ability or an action:

Les instruments sont des facultés ou des actions pour trouver ou pour multiplier les données. Aristote en a enseigné la méthodologie dans *Top.* I, 14-17. (1968, 188)

⁸ One finds the same kind of vague language in Smith, at least in some places. See his description of the purpose of the *Topics* in 1993, 344: 'what Aristotle actually says is that it is his goal in the treatise (...) to find a 'method' that will give us the ability to argue from endoxa'. It is not clear either, then, if Smith distinguishes between dialectic, the natural ability, and this ability as perfected by a method. It is only the latter, in fact, that can be the object of a *discovery*, and it presupposes the ability *given* by nature. See also his explanation of the conclusion of the *Topics* in *Soph. el.* 34.183a37-b1 in 1993, 344: 'Here it is quite explicit that his object was to find a certain ability (*dunamis*).'

JACQUES BRUNSCHWIG (1967)

Brunschwig also distinguishes between the functions of the places and those of the tools, and he assigns a double source to dialectical abundance:

Le dialecticien doit (...) disposer d'un double répertoire, un répertoire de lieux et un répertoire de prémisses; c'est par l'application de ces deux répertoires l'un sur l'autre qu'il trouvera, comme dans un tableau à double entrée, l'argumentation dont il a besoin. (1967, xlii)

Brunschwig, however, then goes on to surprise us. Whereas he examines attentively the other elements of the treatise, he only furnishes a brief note on the tools in his introduction (xliii, n1). 'On peut, dit-il, être bref sur la constitution du répertoire de prémisses' (xlii-xliii). He is so brief, in fact, that he says essentially nothing about the nature of the tools.

YVAN PELLETIER (1991)

Pelletier clearly distinguishes the tools from the places. The tool, he explains, guides us in the determination of the endoxality of propositions; the place, in that of the pertinence of premises. This is how he enters into his chapter on the tools:

Aristote fait reposer l'abondance dialectique sur l'usage d'*organa* et de *topoi*. On a commis l'erreur d'imaginer en eux des moyens rivaux pour obtenir un même et unique effet. Mais pour Aristote, il y a instruments et lieux parce que découvrir l'attaque est une opération double: sélectionner les prémisses d'un raisonnement dialectique, c'est choisir deux fois. C'est choisir les endoxes déterminés d'où l'on pourra inférer la destruction de telle position: en ce discernement-là réside, de la manière la plus stricte, l'acte dialectique, et c'est lui que les lieux rendent possible. Or ce discernement en présuppose un autre: on doit préalablement choisir, parmi les énoncés qui touchent la matière du problème, ceux qui revêtent un caractère endoxal. Les instruments dialectiques visent ce discernement préalable. (1991, 321)

The 'enquête instrumentale' and the 'choix topique' are essentially other.

Clearly aware of what the proper function of the tool is, Pelletier, like De Pater whom he cites in this respect, measures all the importance of the tools for the integrity of the dialectical method:

cette opération [recueillir des endoxes] est primordiale. Sans elle, qui fournit la matière de toute éventuelle argumentation, le dialecticien reste impuissant et muet (...) Le recueil des données constitue donc le présupposé absolu de l'acte dialectique. (Pelletier 1991, 323; 325)

This is so much the case, he affirms, that the dialectician devotes a greater part of his energy and time to assuring this first kind of discernment than to directing the second. Individual reason, he explains, is less self-sufficient in positing this act; it is dependent on what others think and must take the means to find out what this is. Whereas the places, as Pelletier conceives of them, only facilitate and clarify our seizing of an experience of the inference that is already present in every one's reason.

It is precisely one of the objectives of Pelletier's work to define in more essential terms place and tool, the pillars of the method, that Aristotle himself only defined by their common end of furnishing abundance.⁹ Pelletier affirms therefore that the tools are faculties:

l'instrument dialectique, c'est la faculté de discerner l'endoxe; et même d'abord, dans l'ordre d'imposition, l'opération où s'effectue ce discernement. (1991, 323)

Pelletier's criticism of the way De Pater identifies dialectic and its tools as abilities with the methods that perfect them seems justified in the face of the facts. He, at least, has made the distinction very clearly. In fact, he gives an order according to which one may call something a 'tool':

l'instrument, c'est d'abord l'*opération* de reconnaître l'endoxe. C'est ensuite le talent, la faculté que la raison a d'effectuer cette opération, comme *dialectique* nomme le don d'exploiter l'endoxe dans l'investigation d'un problème. Ce sera ensuite, mais seulement par extension, l'art qui parfait ce talent et tous les conseils pour le guider. Ainsi, Gardeil peut, sans autre maladresse que d'y voir un premier sens, présenter l'instrument dialectique comme l'ensemble des conseils par quoi Aristote guide le choix des propositions: "Dans l'esprit d'Aristote, les instruments sont des règles de découverte". (Gardeil, p. 24.) (...) Enfin, au bout de la ligne, on pourra appeler encore instrument le résultat ultime de l'opération instrumentale: la liste encyclopédique des endoxes, en mémoire ou par écrit, qui se constitue à force de répéter l'opération en prévision de problèmes à examiner. (Pelletier 1991, 326-327)

As he himself remarks, Pelletier proceeds in ordering the senses of the word 'tool' as he did for 'dialectic':

Qu'est-ce donc que la dialectique en définitive? C'est une puissance éducable, une puissance qui peut s'adjoindre un art, une τέχνη, une μέθοδος, laquelle s'appellera aussi dialectique. (1991, 77)

⁹ See his Introduction.

Pelletier is the first, and the only one to my knowledge, to speak explicitly of a common definition for the four tools, as well as to explain, at least in a way that seems correct to me, the fundamental character of the first one and the relations of the three others to it. Pelletier—and I follow him here—sees in what Aristotle calls ‘the first tool’ an ability that is partially common to the three others. He also thinks that only the fact that it bears on simple premises is proper to it, whereas the three others prepare the dialectician for particular kinds of argument by the acquisition of more special premises. I will return to his position in the course of the following chapter.

ROBIN SMITH (1997)

We have sufficiently spoken of Smith’s work to know that he distinguishes tool and place:

Aristotle’s dialectical art is to be a procedure for finding premisses that meet two requirements: (i) they will be conceded by our opponent and (ii) they will imply the conclusion we want to establish. To meet (i), we need to know what sorts of thing our opponent will accept, whereas to meet (ii), we need to know what follows from what. A solution to the problem would result if we had a double system for classifying propositions: first as lists of opinions of different sorts of people, next as possible premisses for deriving a given conclusion. Aristotle’s method, as I reconstruct it, rest on just such a system of classification. First, he tells us in I. 14 that we should compile lists of the opinions of various kinds of person. Next, in Books II-VI of the *Topics*, he gives us “locations” (*topoi*) which consist of recipes for constructing arguments for various conclusions (...) To use the method, we first determine our conclusion (which is simply the denial of the answerer’s thesis). Then, using the collection of *topoi*, we find some premisses from which it would follow. Finally, we search for those premisses among the relevant collection of opinions. Once we have found them, all that remains is to present them to our opponent in an appropriate manner as questions (...) (1997, 88)

Smith’s commentary on Chapters 13-18 is detailed and shows that he takes the tools seriously. Nonetheless, he does not attempt to define them essentially: he describes them, rather, by their end. He habitually speaks of each of the tools as ‘a procedure of some sort’ (1997, 89).

PAUL SLOMKOWSKI (1997)

Slomkowski’s position is the most incongruous one I have encountered.

With him, the identification of the places and the tools reaches a sort of paroxysm. Slomkowski approaches the tools when he is involved in verifying whether the conception of the places as ‘investigation-instructions’, a conception that he also attributes to De Pater (‘loi logique’, ‘formule de recherche’) and to Stump,¹⁰ is reconcilable with his own conception of place as a *protasis* (1997, Chapter 2, section C 3, 54-58). He concludes that since in the investigation-instruction, a certain *protasis* and principle is expressed, taking *topoi* as investigation-instructions does not conflict with his interpretation.

Now, Slomkowski finds a confirmation of the fact that, in the investigation-instruction, a *protasis* is expressed precisely in Chapters 13-18 of Book I. Indeed, according to him, the tools have a very similar structure to *topoi*, and are also investigation-instructions. (In support of this, the author gives the occurrence of expressions such as θεωρεῖν, σκοπεῖν, ἐπισκοπεῖν in Chapter 15.) Now, as we know, Aristotle says precisely that each tool is ‘in a way’ a *protasis* (105a25). Slomkowski then reproduces examples of *protaseis* in Aristotle, saying that they are the results of *organa* applied to concrete terms.

And he continues:

The question now arises of how homonymy, differences and similarities are investigated and established? A clear answer is to be found in chapters 15-17 where Aristotle investigates those notions with the help of what are usually called *topoi* in *Top.* B-H and which are obviously meant to be *organa* here. Roughly, the same structure can be found in both cases (...) The main difference between *topoi* in *Top.* B-H and *organa* in A 15-17 is that the aim of the former is to find out whether something is accident (*Top.* B-Γ), genus (Δ), proprium (E) or definition (Z-H, 3), whereas the aim of the latter is to find out whether something is homonymous, different or similar. The aspect which one is advised to look at in A 15-17 can usually be found in B-H as well (...) The same structures are found in investigation-instructions in A 15-17 as in B-H, where they are called *topoi*. The structures we find in A 15-17 are not called *topoi*, and are obviously meant to be *organa*. Such a *protasis* as “sensation differs from knowledge, because it is possible to recover the latter when one has lost it but not the former” is clearly the result of an *organon* of the sort which is described in A 15-17. The difference between “sensation” and “knowledge” can be found with the help of an *organon* which can be described in the following way: “In the case of two things, see if when one

¹⁰ ‘If one looks at the *topoi*-entries in the central books they appear first of all to be investigation-instructions. The *topoi*-entries very often begin with the phrase “another *topos* is to ἐπιβλέπειν/look, σκοπεῖν/investigate, ὀρᾶν ἐξ/examine, etc. whether, with respect to a certain aspect of the thesis, such and such is the case” (1997, 54).

loses them it is possible to recover them both; for if it is only possible with one of them, it is clear that they are different"; (...) Thus to all organa corresponding protaseis can be produced; these organa are therefore in a way protaseis. We have seen that organa are investigation-instructions of a similar structure to the topoi. It might thus be inferred that to topoi too, corresponding protaseis can be produced and that topoi are in a way protaseis. (1997, 57-58)

It seems to me that Slomkowski's understanding of the tools is that they produce premises in two ways, for the examples of Aristotle's that he first takes up are propositions obtained by the tools, whereas the last example of a proposition given by a tool is rather a description of the use of the tool.

I must admit that I am disconcerted by Slomkowski's position, and I have no idea where he is trying to go with it. The only thing that I will say is that whatever the case may be for the places—they are not my purpose here—it is certain that Aristotle, when he says that each tool is 'in a way' a *protasis* and allows us to make them, does not mean that the ways of using the tools can be described by propositions, but rather that they allow us to obtain propositions. His examples show this clearly. Yet Slomkowski does mention them but I think that what he sees there is an application of the propositions describing the tools in concrete terms.

CHAPTER FIVE

THE CONSIDERATION OF THE FOUR DIALECTICAL TOOLS IN THE *TOPICS*

ARISTOTLE'S FIRST ENUMERATION OF THE FOUR TOOLS

As we read in I 13, 'the tools through which we will abound in syllogisms' (and this is the only definition Aristotle will ever give of them) 'are four': one is to assume premises; the second is to be able to distinguish in how many ways each [word] is said; the third is to find differences; the fourth, the examination of likeness:

τὰ δ' ὄργανα δι' ὧν εὐπορήσομεν τῶν συλλογισμῶν¹
ἐστὶ τέτταρα, ἓν μὲν τὸ προτάσεις λαβεῖν, δεύτερον δὲ
τὸ ποσαχῶς ἕκαστον λέγεται δύνασθαι διελεῖν, τρίτον

¹ Certain manuscripts present συλλογισμῶν + καὶ τῶν ἐπαγωγῶν. See Alexander's commentary. He thinks that Aristotle is proposing in fact to present the means for abounding in 'dialectical discourses or arguments': νῦν καὶ περὶ τῶν ὀργάνων προτίθεναι λέγειν, ἃ ἐστὶ συντελοῦντα πρὸς τὴν εὐρεσίαν τε καὶ εὐπορίαν τῶν διαλεκτικῶν λόγων. ταῦτα δὲ ἐστὶ συλλογισμὸς τε καὶ ἐπαγωγή, ὡς προείρηκεν. αὐτὸς μὲντοι τῶν συλλογισμῶν ἐμνημόνευσε μόνων, καὶ ἐστὶ τὸ λεγόμενον ἴσον τῷ 'τὰ δὲ ὄργανα δι' ὧν εὐπορήσομεν τῶν διαλεκτικῶν λόγων, ἐστὶ τέσσαρα' (88.2-6).

<δὲ> τὸ τὰς διαφορὰς εὐρεῖν, τέταρτον δὲ ἡ τοῦ ὁμοίου σκέψις. (*Top.* I 13.105a21-25)²

Thus, the tools are to be distinguished by the acts for which, as we will explain, they are abilities, and the acts in turn by their objects, just as the ability to see and the ability to hear are distinguished by actually seeing color and hearing sound. We shall see later that this is true precisely of all abilities. Aristotle moreover proceeds in this way, in his *De Anima*, when distinguishing abilities of the soul (II 4.415a16-22),³ and in the *Nicomachean Ethics*, when distinguishing the kinds of friendships.⁴ This is the consideration of objects that also commands the respective order of Chapters 16 and 17. For the study of the dialectical tools, therefore, as for that of all abilities, Aristotle roots his reflection in a consideration of the objects of these abilities.

The first tool is to take (procure, get, choose, or select) premises (λαβεῖν πρότασεις). The second tool is said to be the ability to divide or distinguish (δύνασθαι διελεῖν) in how many ways each is said (ποσαχῶς ἕκαστον λέγεται). This implies

² 'The tools by means of which we may abound in syllogisms are four: one is obtaining premisses, the second is being able to distinguish how many ways a word is said, the third is finding differences, and the fourth is the examination of likeness.' Smith translation modified.

³ There Aristotle is answering the question from the beginning of Book I (1.402b10-16) where he was inquiring about (and almost asserting) the order in which abilities, actualities and objects need to be considered. See Aquinas, Ia q.77 a.3 and *De Ver.* a.13.

⁴ Habits are also distinguished by their acts, and these by their objects. For instance, in the thinking out of the definition of friendship in Book VIII and the distinction of three kinds of friendship among equals it is very clear that these three friendships are distinguished by diverse loving and these by diverse lovable. Aristotle first asks what sort of things give birth to friendship. He turns to the object, as he had already done for *proairesis*, defined in terms of *proaireton*, and for *bouleusis*, defined by *bouleuton*. As one loves what is good, he first distinguishes three lovable objects: the good simply speaking, the agreeable, and the useful: Τάχα δ' ἂν γένοιτο περὶ αὐτῶν φανερόν γνωρισθέντος τοῦ φιλητοῦ. It seems that not everything is loved, but only what is lovable, and that this is either what is good, pleasant, or useful: δοκεῖ γὰρ οὐ πᾶν φιλεῖσθαι ἀλλὰ τὸ φιλητόν, τοῦτο δ' εἶναι τὸ ἀγαθὸν ἢ ἡδὺ ἢ χρήσιμον (*Eth. Nic.* VIII 2.1155b17-19). The definition that Aristotle gives in the conclusion of Chapter 2 also refers to these three lovable things: δεῖ ἄρα εὐνοεῖν ἀλλήλοις καὶ βούλεσθαι τὰγαθὰ μὴ λανθάνοντας δι' ἓν τι τῶν εἰρημένων (1156a3-5). Finally, at the beginning of the third chapter, where he passes from the definition of friendship to distinguishing more fully the species or forms of friendship, referring to the objects he says: Διαφέρει δὲ ταῦτα [ταγαθα] ἀλλήλων εἶδει καὶ αἱ φιλήσεις ἄρα καὶ αἱ φιλίαι (1156a6-7). Then in the next sentence, he concludes that there are three species of friendship, equal in number to the three things loved: τρία δὲ τὰ τῆς φιλίας εἶδη, ἰσάριθμα τοῖς φιλητοῖς (1156a7-8). Now the first sentence has shown that he goes from three things loved (φιλητα) to three friendships (φιλίαι) through the acts (φιλήσεις), the lovings in this case.

that something is 'said in many ways' and is, therefore, tied in with what is often referred to as 'equivocation' or 'analogous meanings' or 'homonymy'. Aristotle takes up this question at the beginning of the *Categories* (1.1a1-5).⁵ Now, since the Greek way of talking about this there ('ὁμώνυμα λέγεται...') is to say that 'things are named or called homonyms', and since equivocation is in fact primarily in things and by reference only in the concepts and terms, some have tended to think that as soon as it is a question of equivocation, Aristotle is always talking about things, rather than words. For example, according to Joseph Owens, in Chapter 15 of Book I of the *Topics*, expressions such as *πολλαχῶς λέγεται* are to be taken as equivalent of 'homonymous' or 'equivocal', so that we should generally translate them in such wise as to make of things the subject of which it is a question and that the object of the second tool must be understood to be things (1963, 108; 115; 113n31; 122).⁶

While accepting that there the verb *λέγεται* indeed often have things as its subjects, and that the expression in which it appears then corresponds to the use of 'homonymous' in the first sense, I nonetheless find it difficult to see how one could talk about the number of ways a thing (in fact, each thing) would be said. For example, Aristotle, bringing up those cases where the contrary is named by a single word having different meanings, remarks:

Ἐπ' ἐνίων δὲ τοῖς μὲν ὀνόμασιν οὐδαμῶς διαφωνεῖ, τῷ δ' εἶδει κατάδηλος ἐν αὐτοῖς εὐθέως ἢ διαφορὰ ἐστίν, οἷον ἐπὶ τοῦ λευκοῦ καὶ μέλανος. φωνὴ γὰρ λευκὴ καὶ μέλαινα λέγεται, ὁμοίως δὲ καὶ χρῶμα. τοῖς μὲν οὖν ὀνόμασιν οὐδὲν διαφωνεῖ. τῷ δ' εἶδει κατάδηλος ἐν αὐτοῖς εὐθέως ἢ διαφορὰ. οὐ γὰρ ὁμοίως τό τε χρῶμα λευκὸν λέγεται καὶ ἡ φωνή. (*Top.* I 15.106a23-29)⁷

The expression *πολλαχῶς λέγεται* is involved here at the very end, under an equivalent negative form. It is certain that what is involved here are things—color and voice—that are not said to be 'white' (in Greek, *λευκὸν*) in the same way:

⁵ Alexander, *In Top.* 97.19-98.3 is also referring to this text in order to explain how, in Chapter 15, Aristotle formulates the question that the second tool is supposed to allow us to answer, namely, *Πότερον δὲ πολλαχῶς ἢ μοναχῶς τῷ εἶδει λέγεται*.

⁶ Pelletier also thinks that the second tool bears on things: see 1991, 329 and 332, where he talks about it as a 'discernement des natures homonymes'.

⁷ 'In some cases, there is no disagreement at all in the names, but in the species the difference between them is obvious at once, as in the case of 'bright' and 'dark': for a sound is called bright or dark, and similarly a colour. Now in names, these do not disagree; in the species, however, the difference between them is obvious at once, for the colour and the sound are not called bright in the same way.' Smith translation

The names in these cases are the same, but the forms are different. The *things*—the color and the sound—are denominated by the same names, but in different ways. In such cases the meaning of ‘said in various ways’ is clearly ‘things expressed by the same term in various ways.’ These cases correspond exactly to the definition of the ‘equivocals’ in the *Categories*. (Owens 1963, 114n31)

I remark however that it is not a question of counting in how many ways each of the aforesaid things is said to be ‘white’ in Greek. Indeed, if Aristotle had explicitly repeated his preoccupation with the determination of the number of meanings here, it is the word ‘white’ that would have been the object of it, and not voice and color. Indeed, each of these can be said to be ‘white’ in only one way.

Therefore, such a uniform interpretation of πολλαχῶς λέγεται and of the related expressions as equivalent for ‘equivocals’, in addition to not seemingly required by the Greek text, as witness the vast majority of the translators, seems to me inadequate in the context of the second tool, where it is a question of determining in ‘how many ways each is said’. For the meaning is surely not that a thing can be predicated or be subject in different senses; a nature has only one meaning or definition. It is equally evident that Aristotle was not intending to distinguish how many attributes can belong to a thing—taken according to one meaning—no more than he was trying to distinguish to how many subjects a thing can be attributed. The subjects and predicates of a nature are in fact infinite, since one can predicate accidents in dialectic. On the other hand, to distinguish in how many ways a word is said is quite possible, for it at least is able to have many meanings, precisely when it names many natures.⁸ The only entity for which one can determine the different ways that it is said is the word. A thing or nature does not lend itself to this.

Furthermore, one of the uses of the second tool is to insure that two persons in a discussion are thinking about the same thing or things when using the same word or words

⁸ To take up one passage from the *Metaph.* (V 2.1013b4-7) that Owens also uses (1963, 112-113): even if Aristotle wanted to say that things such as the sculptor and the bronze were called ‘causes’ in different ways, it remains that the only one of the entities implied here—things, the word ‘cause’ and the definitions—able to be numbered as to the ways it is said is the word ‘cause’. Indeed, both the sculptor and the bronze, even if they are things said in different ways in that each is said to be ‘cause’ in a different way, are each said individually to be a ‘cause’ in only one way.

(*Top.* I 18.108a18-26).⁹ Indeed, no discussion is possible unless the words used have only one clear meaning when used, and signify the same thing for those in the discussion, since not to signify one thing is to signify nothing at all, according to Aristotle. (If one concept is not understood, nothing is understood, since the one understanding must distinguish the object of his thought from all others.) Now, if words meant nothing definite, every exchange of thought between people would be rendered impossible; moreover, one would not even be able to think clearly oneself:

τὸ γὰρ μὴ ἓν σημαίνειν οὐθὲν σημαίνειν ἐστίν, μὴ
σημαινόντων δὲ τῶν ὀνομάτων ἀνήρηται τὸ διαλέγεσθαι
πρὸς ἀλλήλους, κατὰ δὲ τὴν ἀλήθειαν καὶ πρὸς αὐτόν·
οὐδὲ γὰρ ἐνδέχεται νοεῖν μὴ νοοῦντα ἓν (*Metaph.* IV 4.1006b7-
11)¹⁰

This does not mean that Aristotle is criticizing the existence of words with multiple meanings here; what he is excluding is an infinite number of meanings. Indeed, that a word should be able to have many meanings does not prevent its having a single one at a time in actuality. One has only to be sure to use it in this way; and, theoretically, one could also give a particular name to each of these meanings (*Metaph.* IV 4.1006a35-b7). Now, in both cases, to have distinguished the diverse meanings would be necessary, and it is for this reason that they must exist in a finite number. Now, the ability whose goal is to assure that the interlocutors facing the same words should think of the same things, has as its object the words and their meanings, since, when they do not think of the same things, it is their relation to the words that causes this, and not to the things they signify. Thus, it must be words and not things that is directly the object of the second tool.

Finally, the second tool also has as a purpose to avoid the breakdown of discussion because of ambiguity (*Top.* I 18.108a26-29). Now, the unity that is cause of this kind of fallacy is only in the word. Aristotle is categorical about this and he often repeats it. Things being infinite in number, whereas words and definitions are finite, it is inevitable, he explains

⁹ It is the same for someone alone. When one is thinking by oneself, the second tool is also necessary, since one cannot think without words (or not very clearly, at least). Now, thinking about two different things (at the time of conceiving and then judging) when one is faced with a word that designates both of them, is serious, since one then believes that one is only thinking about one.

¹⁰ 'for not to have one meaning is to have no meaning, and if words have no meaning there is an end of discourse with others, and even, strictly speaking, with oneself; because it is impossible to think of anything if we do not think of one thing.' Tredennick translation

from the beginning of the *Sophistical Refutations*, that many things should be signified by the same word. Whence, he adds, those who have no experience of the signifying power of words end up in fallacious reasoning (*Soph. el.* 1.165a4-17). Further on he says:

Τρόποι δ' εἰσὶ τοῦ μὲν ἐλέγχειν δύο· οἱ μὲν γάρ εἰσι παρὰ τὴν λέξιν, οἱ δ' ἔξω τῆς λέξεως. ἔστι δὲ τὰ μὲν παρὰ τὴν λέξιν ἐμποιοῦντα τὴν φαντασίαν ἔξ τὸν ἀριθμόν· ταῦτα δ' ἔστιν ὁμωνυμία, ἀμφιβολία, σύνθεσις, διαίρεσις, προσφθία, σχῆμα λέξεως. (...) τοσαυταχῶς ἂν τοῖς αὐτοῖς ὀνόμασι καὶ λόγοις μὴ ταῦτὸ δηλώσαιμεν. εἰσὶ δὲ παρὰ μὲν τὴν ὁμωνυμίαν οἱ τοιοῖδε τῶν λόγων, οἷον ὅτι μανθάνουσιν οἱ ἐπιστάμενοι· τὰ γὰρ ἀποστοματιζόμενα μανθάνουσιν οἱ γραμματικοί· τὸ γὰρ μανθάνειν ὁμώνυμον, τό τε ξυνιέναι χρώμενον τῇ ἐπιστήμῃ καὶ τὸ λαμβάνειν ἐπιστήμην. (*Soph. el.* 4.165b23-34)¹¹

The mechanism of the fallacy of equivocation incontestably relies on language: τῶν δ' ὀνομάτων τῷ μὲν σοφιστῇ ὁμωνυμίαι χρήσιμοι (παρὰ ταύτας γὰρ κακουργεῖ) (*Rh.* III 2.1404b37-38).¹² There is thus every reason to believe that the ability for which one must be trained in order to avoid committing such fallacies has for its object the meanings of words.

Indeed, Aristotle says in Chapter 16 that the study of the fallacies from language is useful to philosophy because it makes it easier to see in how many senses each term is said (ἄμεινον ἔχειν ποιοῦσι πρὸς τὸ ποσαχῶς ἕκαστον λέγεται 175a5-7), using the same expression as that by which he designates the second tool in the *Topics* without there being any doubt that ἕκαστον then designates words.¹³ Now, as every kind of

¹¹ 'There are two modes of refutations; one has to do with the language used, the other is unconnected with the language. The methods of producing a false illusion in connection with language are six in number: equivocation ambiguity, combination, division, accent and form of expression (...) this is the number of ways in which we can fail to indicate the same thing by the same terms or expressions. Arguments such as the following are based on equivocation: 'Those who know, learn; for it is those who know the use of letters that learn what is dictated to them.' Here 'learn' is equivocal, meaning 'understand by using knowledge' and 'acquire knowledge'.' Forster translation

¹² 'In regard to nouns, homonyms are most useful to the sophist, for it is by their aid that he employs captious arguments' Freese translation. See also *Soph. el.* 17.175b39176a2.

¹³ The whole passage reads in fact thus: χρήσιμοι μὲν οὖν εἰσι πρὸς μὲν φιλοσοφίαν διὰ δύο. πρῶτον μὲν γὰρ ὡς ἐπὶ τὸ πολὺ γινόμενοι παρὰ τὴν λέξιν ἄμεινον ἔχειν ποιοῦσι πρὸς τὸ ποσαχῶς ἕκαστον λέγεται καὶ ποῖα ὁμοίως καὶ ποῖα ἑτέρως ἐπὶ τε τῶν πραγμάτων συμβαίνει καὶ ἐπὶ

knowledge that develops by itself an ability either bears on that ability itself, or on its activity, or on its object, and that equivocation is neither the ability to distinguish the number of meanings, nor its activity, it is necessary that it be the object of the ability bearing on words. In Chapter 17, Aristotle affirms in fact that it is necessary to solve the fallacy of equivocation by making a distinction (διαίρεσιν) between the meanings of words. Thus, in the *Sophistical Refutations*, the second tool is often alluded to by means of the fallacy of equivocation, which cannot be avoided without it. Now, Aristotle is much more explicit there than in the *Topics* about its being concerned first with words.

That the second tool of dialectic is about the many meanings of words and their distinction does not mean it does not concern things, of course.¹⁴ Words name things as they are known. In addition to the reasons already given, another comes to mind for believing that at least in dialectic this tool is first about words. Dialectic starts necessarily with words since it starts with what is in opinion, and opinions are expressed in words:

οὐκ ἔστιν αὐτὰ τὰ πράγματα διαλέγεσθαι φέροντας,
ἀλλὰ τοῖς ὀνόμασιν ἀντὶ τῶν πραγμάτων χρώμεθα ὡς
συμβόλοις (*Soph. el.* 1.165a6-8)¹⁵

Yes, the dialectician is trying to come to a knowledge of things, and yes, the opinions have their origin in some kind of experience of things, but what they are now become must be sought through the words that express them.

It would be necessary to proceed to the analysis of many texts to show fully that in Chapter 15 of the *Topics*, it is essentially a question of words said with many possible

τῶν ὀνομάτων (*Soph. el.* 16.175a5-9). See Albert, *In Soph. el.* 656: 'Dicemus ergo quod utiles sunt solutiones orationum sophisticarum, ad philosophiam quidem propter duo. Primum autem duorum est, quia orationes sophisticae sunt in dictione, aut extra dictionem: orationes autem sophisticae in dictione solvuntur per distinctionem multipliciter. Saepe autem ea quae secundum multiplex in dictione fiunt (quando bene distincta sunt) melius nos habere faciunt ad philosophia intellectum, scire per distinctionem quoties (hoc est, in quo sensu) singulum dicitur'.

¹⁴ See *Soph. el.* 10.170b19.

¹⁵ 'it is impossible to argue by introducing the actual things under discussion, but we use names as symbols in the place of the things.' Forster translation

meanings.¹⁶ Moreover, this problem changes nothing as far as the purpose of our thesis is concerned, for as much as, whatever the exact nature of the object of the second tool, it is clearly used by Aristotle in other treatises, among which the *De Anima* and the *Metaphysics*, as Owens himself concedes.

Passing on now to the third tool, we see that its purpose is to discover differences (τὰς διαφορὰς εὑρεῖν), especially between things of the same kind or genus and things not far apart, since the differences between things belonging to remote genera are generally rather evident (*Top.* I 16).

Finally, the fourth tool serves to look carefully at the likenesses of things (τοῦ ὁμοίου σκέψις), especially those somewhat distant from one another, where there is a proportional likeness. This does not exclude, however, a consideration of the likenesses of those things in the same genus or kind (*Top.* I 17).

It is noteworthy that Aristotle uses the word εὑρεῖν for the third tool and σκέψις for the fourth one. Εὑρεῖν means to discover, while σκέψις means a consideration or an examination, even a doubt (hence, our word 'skeptic'). Perhaps Aristotle wishes to insinuate that the difficulty with differences is more to find them, while the difficulty with likenesses is not so much to find them as to see to what extent or in what way things are alike, which implies a certain attention to differences. As Albert Einstein 1938, 287 put it: 'It is easy to find a superficial analogy which really expresses nothing.' Indeed, we are deceived by likeness, not because we are mistaken as to there being a likeness, but because we are unable to consider carefully to what extent or in what way things are alike.

Perhaps this difference in the verbs used to express the activities of these tools corresponds also to the greater danger of being deceived by likeness. Plato warns us in the *Sophist*: 'But he who does not want to be tripped up, ought always to be very much on his guard in this matter of likenesses, for it is the slipperiest thing' (231a). It is in fact the likenesses between things that the mind first perceives naturally; 'children first call all women mother'.... Now, in the presence of things that are alike in some way, one is often tempted to conclude that they are identical, whereas this may not at all be the case. On the other hand, it is

¹⁶ Smith 1997, 11; 89 also thinks that the second tool is about words, and he translates *Topics* I 13. 105a23-24: 'the second is being able to distinguish how many ways a word is said'. This is the opinion of the great majority of commentators and authors, among whom Alexander, Albert, Maurus, Waitz, Braun, Le Blond, Thionville, De Pater, Frappier, Brunschwig, Slomkowski.

true that as soon as things are seen to differ in one respect, they are not the same. It is only when trying to be more precise and to conclude to otherness in every respect that one runs the risk of being mistaken. And this is a rarer thing. Thus, although this incorrect or non-use of the third tool (on things clearly alike) always leads to a confusion of things, the omission of use of the fourth tool (on things clearly unlike) leads to error when one affirms that things are totally other, whereas they are only so in some respect, but it only leads to ignorance when one does not grasp that general and abstract nature that only exists incarnate in particular things.¹⁷ Thus, since things that are clearly alike are more a cause of error than those that are clearly unlike, the third tool would seem to be more necessary. This is another reason that could be advanced to explain why Aristotle speaks of discovering differences first.

All this in no way denies the great help that likeness can often furnish to the inventive mind. A fuller reading of the Einstein's text quoted above shows the great importance he sees in a well understood proportion or analogy, and not just the danger he sees in a superficial or misunderstood one:

It has often happened in physics that an essential advance was achieved by carrying out a consistent analogy between apparently unrelated phenomena. In these pages we have often seen how ideas created and developed in one branch of science were afterwards successfully applied to another. The development of the mechanical and field views gives many examples of this kind. The association of solved problems with those unsolved may throw new light on our difficulties by suggesting new ideas. It is easy to find a superficial analogy which really expresses nothing. But to discover some essential common features, hidden beneath a surface of external differences, to form, on this basis, a new successful theory, is important creative work. The development of the so-called wave mechanics, begun by de Broglie and Schroedinger (...) is a typical example of the achievement of a successful theory by means of a deep and fortunate analogy. (Einstein 1938, 287)¹⁸

¹⁷ Both are kinds of ignorance (ἄγνοια). The second is a pure negation of knowledge (ἡ ἄγνοια κατ' ἀπόφασιν), whereas that ignorance which we call 'error' (ἀπᾶτη) is a positive state of mind (ἡ ἄγνοια κατὰ διάθεσιν) which consists in being in what is false (see *An. post.* I 16.79b23-24; 12.77b24-27).

¹⁸ See also Duhem 1954, 95: 'The history of physics shows us that the search for analogies between two distinct categories of phenomena has perhaps been the surest and most fruitful method of all the procedures put in play in the construction of physical theories.'

According to Einstein and Duhem, analogy is even the principal way discoveries have been made in the history of science. Even though this is not dialectic, it shows how important proportion or analogy is in discovery; and dialectic is said to be the *pars inventiva* of logic.¹⁹

To get back to Aristotle, when he wants to show that the natural form is the final cause of the matter and, therefore, that it pertains to the same natural science to study them, he makes this manifest by a likeness of nature to art.²⁰ As Aquinas puts it, that form should be last in generation is clear;²¹ but that it should be the final cause is more difficult to see. And he pursues:

Sed quod sit cuius causa fit respectu materiae, manifestat per similitudinem in artibus. (*In Phys.* II 4#173)

Here is a case where likeness is useful. Now, as one must often make use of likenesses in this way as principles of manifestation, likeness occupies a large place in the life of the intellect which cannot do without it. For example, if one removes the examples in the *Nicomachean Ethics*—likeness is always the principle of manifestation in the example—one cuts out a good part of the treatise. In natural philosophy, Aristotle often makes use of art to manifest nature—we have given an example of this. And we have also seen that in logic, Aquinas uses this procedure to make manifest the acts of reason: they are, he says, like the acts of nature in a certain respect; such that it is by turning ourselves towards these acts of nature that he helps us understand the kinds of rational discourse.

But it remains true that likeness is easily abused when we confuse what ought to be distinguished. Plato uncovers a good example of this in the *Sophist*. In the passage that interests us, we first find a likeness drawn from the body:

Doctors who work on the body think it can't benefit from any food that's offered to it until what's interfering with it from inside is removed. The

¹⁹ See Aquinas' Proemium to the *Posterior Analytics*, #6.

²⁰ See *Ph.* II 2.194a. The argument, for that matter, can be nicely presented under the form of an hypothetical syllogism whose major depends on the use of the fourth tool: if the artificial form is the end of the artificial matter, then the natural form is the end of the natural matter. This conditional proposition is based on the likeness between the relation form, matter in art and in nature. Now, the artificial form is the end of the artificial matter. Therefore, the natural form is the end of the natural matter. We must note that Aristotle ends by remarking on a difference between the things that he has just compared: the natural matter exists prior to natural compounds: 'Ἐν μὲν οὖν τοῖς κατὰ τέχνην ἡμεῖς ποιοῦμεν τὴν ὕλην τοῦ ἔργου ἕνεκα, ἐν δὲ τοῖς φυσικοῖς ὑπάρχει οὐσα (194b8).

²¹ 'Et quidem quod forma sit ultimum generationis, hoc est per se manifestum' (*In Phys.* II 4#173).

people who cleanse the soul, my young friend, likewise think the soul, too, won't get any advantage from any learning that's offered to it until someone shames it by refuting it, removes the opinions that interfere with learning, and exhibits it cleansed, believing that it knows only those things that it does know, and nothing more. (*Soph.* 230c)

Just as the purgative method is necessary for the good of the body, so is it also necessary for the good of the mind: in order to get rid of those opinions that are obstacles to teaching. And the Stranger continues:

For all these reasons, Theaetetus, we have to say that refutation is the principal and most important kind of cleansing.

Refutation will play a capital role in the purgative method. Then the Stranger asks Theaetetus:

Well, then, who are we going to say the people who apply this form of expertise are? I'm afraid to call them sophists.

Why?

So we don't pay sophists too high an honor.

Attribute the purgative method, which consists in refutation, to the sophist, is to do him too much honor; he doesn't really refute as does the dialectician. The sophist does not want the intellectual good of his listener; he wants to lead him astray and deceive him.

But there's a similarity between a sophist and what we've been talking about.

And between a wolf and a dog, the wildest thing there is and the gentlest.²² If you're going to be safe, you have to be especially careful about similarities, since the type we're talking about is very slippery.

Just as the wolf can appear to be a dog, likewise, the sophist resembles the dialectician.

To sum up, likeness will contribute to the good of the mind, but to the degree that the difference is also detected. Otherwise, one runs the risk of confusing things that are distinct. The fact that the sophist and the dialectician refute does not mean that one should talk about a conformity between them, for their ends are clearly opposed, and that is more important to notice than their likeness in the use of refutation. Furthermore, the third tool, combined with the fourth, can help detect a more fundamental difference between things manifestly different,

²² Alexander, explaining that the difficulty in finding the differences comes about when it is a question of like things, gives as examples two species of bird, as well as the wolf and the dog (*In Top.* 117.7-10).

one from which will flow all the others.²³ For example, whoever has understood that both dialectic and rhetoric bear on all things will be better situated to discover that the first seeks to conclude the universal, whereas the latter is interested in the singular. Now, this difference is more fundamental than other ones, which may be more evident and concrete as, for example, that the orator tries to act on the passions of his listener and that he discusses more frequently about actions than the dialectician.

The danger begins when there is a lack of discernment and when the intellect does not distinguish what it ought to. This is why likeness is not a cause of error in the case of the metaphor: the things that the poet brings together are very far apart, and do not need to be distinguished, since they remain clearly too different. Although it may find the comparison between the metal hand of the clock and the tongue, the organ of speech, to be beautiful, the intellect nonetheless runs no risk of confusing them.

Most of the time it is likeness that presents certain dangers of error. It can however happen that the difference so strikes the mind that it tends to deny any likeness. In this case, or when a likeness can be useful for making something known by means of something else, one must stress the likenesses. For example, Aristotle, at the very beginning of his *Rhetoric*, points out a likeness between rhetoric and dialectic in order to make the former better known by means of that latter: neither dialectic nor rhetoric bears on a determinate subject (*Rh.* I 1.1354a1-4).

One can give examples of things between which the differences are more numerous than those between rhetoric and dialectic, and for the knowledge of which the fourth tool is necessary if one does not wish to err.²⁴ In the *Sentences, Pro.* q.1 a.5, Aquinas asks if it is fitting to use metaphors in theology. The objection brings in a difference so great between theology and poetry that it is tempting to only take account of this. Here is the difficulty:

²³ There is no reason to make use of the third tool to establish that things differ between which the principal preoccupation is habitually to discover likenesses, since such things clearly differ from one another. There is often reason however to have recourse to the third tool, once the likenesses have been discovered between such things, in order to make clear the nature of these differences. There is, moreover, such a use that Aristotle seems to call upon when he says, in Chapter 16, that it is necessary to search for the differences not only between things that are in the same genus, but also between those that are in different genera, but are not too far apart from one another. To use the third tool on such objects supposes in fact that one has seized some likeness between things that are otherwise clearly different—something that pertains to the fourth tool.

²⁴ The example that follows, as well as the essential of the reflections that accompany it are drawn from the *Réfutations sophistiques, Notes de cours*, T.I of Mgr. Maurice Dionne, Institut Apostolique Renaissance Inc., 1976, 24 seq.

Scientiarum maxime differentium non debet esse unus modus. Sed poetica, quae minimum continet veritatis, maxime differt ab ista scientia, quae est verissima.²⁵

To the degree that one relies on fictions there where the proper principles are fictive, such as in poetry, there is no question of truth. Thus, whoever says poetry says fiction; on the other hand, whoever says theology says very great truth. The opposition is so great that it seems there is no place for any unity between the two, for any likeness:

Ergo, cum illa procedat per metaphoricās locutiones, modus hujus scientiae non debet esse talis.

Here is Aquinas' answer:

Ad tertium dicendum, quod poetica scientia est de his quae propter defectum veritatis non possunt a ratione capi.

Because of their lack of truth, reason cannot, as it were, grab a hold of the things that interest the poet and it cannot represent them in its own way, by using its own tools, the syllogism, for example, or even the example, or any argument whatsoever: the poet does not argue and he cannot argue, because of the defect in intelligibility of what he is talking about. Nonetheless,

Unde oportet quod quasi quibusdam similitudinibus ratio seducatur. Theologia autem est de his quae sunt supra rationem. Et ideo modus symbolicus utrique communis est, cum neutra rationi proportionetur.

It is as though one were saying: poetry bears on objects 'quae sunt infra rationem', below reason. Theology, on the other hand, bears on objects that are above reason. In both cases, there is a disproportion to reason. That is a likeness that allows one to say that theology, as to its mode of using metaphors, is like poetry. They do not use them for the same end, but it remains that in both cases the use of them is because of a disproportion to reason.

Furthermore, the fourth tool, when combined with the third, can help to identify resemblances that are principal and less accidental between things that are clearly alike.²⁶

²⁵ The word 'poetica' has, according to the context two different meanings, as also do the words 'dialectica', 'rhetorica', 'sophistica'. 'Poetica' can signify poetics, that is to say, the method of the poet and the scientific study of this method in which one defines the genera of poetry, the tools of the poet, etc. The *Poetics* of Aristotle, for example. But here it is a question of the work itself of the poet. It is necessary to translate 'poetica' by 'poetry'.

²⁶ There is no reason to have recourse to the fourth tool in order to establish that things between which the principal preoccupation is to discover differences are alike, because such things are clearly alike. There is often reason, however, to have recourse to the fourth tool once the differences have been discovered between such

Thus, to keep the essential and true resemblance between the sophist and the dialectician among all the likenesses that show up at first sight (both the sophist and the dialectician discuss in public, proceed from one interlocutor to another, are interested in the education of youth, are accused of debauching them, of holding religion up to ridicule), both the third and the fourth tools are necessary. For, when one has *discovered* the difference of purpose between Socrates and Protagoras, between the dialectician and the sophist, one is more in a position to appreciate that it is first of all insofar as they refute that they are alike, since their respective goals both require this means.

Thus, we must not think that the knowledge of things that are different can get by without the third tool, nor that the knowledge of things that are alike can get by without the fourth tool. For the fourth tool having helped to prevent a likeness between things that are clearly different from going unnoticed, it is still by means of the third tool that one discovers and proclaims, with greater precision and assurance the pertinent differences. Having seen that the point and the unit are alike, at least as to this that they are principles, one is guided in expounding the differences. There are many of them, but we now know that the interest consists in showing how the point and the unit are principles in a different way. One is so in continuous quantity, the other in discrete quantity. To take up once again the example from theology and poetry, whoever would first see their difference, and then go on to use the fourth tool to see their resemblance, which is the disproportion between reason and its object, would be in a good position to better identify, by means of the third tool, the fundamental difference between the two disciplines, namely, the more or less greater intelligibility of their object. It is from this difference, in fact, that the other, more evident, differences follow, for example, their ways of proceeding and their respective difficulty.

In like manner, having discovered a difference between things that are clearly alike thanks to the third tool, it is now the turn of the fourth tool to help us zoom in on the most important likeness. Having discovered that the sophist and the dialectician differ in their purpose, one is guided in the presentation of the likenesses that are so numerous that it is difficult to tell which ones would be usefully underlined. One now understands, in fact, that it must be in acting in a similar way, that is, in refuting, that the sophist and the dialectician aim at

things: to make clear the nature of their likeness. It is such a use of the fourth tool on things that are clearly alike, and simultaneous to the use of the third tool that Aristotle is in fact describing in Chapters 17 and 18, when he speaks about the utility of the fourth tool for establishing the genus. One never seeks the genus of things that are alike, and about which one is not aware that they differ essentially.

different goals, since a difference of purpose makes for a difference in the agent, the one wanting to truly refute, the other, only apparently.

It is therefore evident that the third and fourth tools complement one another. This we will also see in examining Chapter 18. The fourth tool is not sufficient for all the uses that Aristotle assigns there to it: they requires the third tool. The fourth tool might be enough for induction, but it is not enough for definition which requires the third tool to get the differences. Likewise, the third tool does not suffice for all its uses. It might be sufficient for syllogisms that two things are different but not for definition which requires the fourth tool to get the genus. 'Studying similarities is a complementary process to finding differences' says Smith 1997, 89. A bit like knife and fork, to take an example from a tool for the body. This is a current preoccupation for intellectuals. Here is how Bacon illustrates the necessity for the recourse to the two natural abilities in which these dialectical tools are rooted:

There is one principal and as it were radical distinction between different minds, in respect of philosophy and the sciences; which is this: that some minds are stronger and apter to mark the differences of things, others to mark their resemblances. The steady and acute mind can fix its contemplation and dwell and fasten on the subtlest distinctions; the lofty and discursive mind recognizes and puts together the finest and most general resemblances. Both kinds however easily err in excess, by catching the one at gradations the other at shadows. (*Novum Organum*, lv)

ARISTOTLE'S CONSIDERATION OF THE FOUR TOOLS IN PARTICULAR

After having enumerated the tools by means of which we will abound in arguments, Aristotle discusses each. The first, procuring premises, receives a detailed treatment in Chapter 14, and the second, distinguishing the number of ways a word is said, an even longer one in Chapter 15—almost a fourth of Book I, says Smith. The third and fourth, finding differences and the examination of likeness, rate only cursory discussion (Chapters 16 and 17).

THE FIRST TOOL: THE SOURCES OF ENDOXAL PREMISES AND TWO RULES FOR ORDERING THEM. (CHAPTER 14)

Alexander speaks of places and starting points (τόπους τινὰς καὶ ἀφορμὰς) under this tool:

Περὶ τῆς τῶν προτάσεων ἐκλογῆς πρῶτον λέγων τόπους τινὰς καὶ ἀφορμὰς τῆς τε ἐκλογῆς καὶ τῆς εὐπορίας αὐτῶν παραδίδωσιν. (*In Top.* 90.7-8)

I don't think that this way of speaking should be followed. Indeed, Aristotle seems to use the word 'place' for what we find in Books II through VII. The last sentence in Book I is:

Τὰ μὲν οὖν ὄργανα δι' ἧν οἱ συλλογισμοὶ ταύτ' ἐστίν· οἱ δὲ τόποι πρὸς οὓς χρήσιμα τὰ λεχθέντα οἶδε εἰσίν. (*Top.* I 18.108b32-33)

Now, the definition of place that we adopted does not apply to what we are about to examine. I will thus speak, at least in this chapter, of where we look to discover probable opinions from which to reason dialectically, of 'sources of probable premisses'.

First, Aristotle goes back to the Chapters 1 and 10: following the definition of probable opinion, we can propose the opinions of all men or most men or the wise men, either all of them or most of them or the most famous of them.²⁷ Secondly, Aristotle refers to chapter 10: we can propose opinions according to the established arts:

²⁷ See Pelletier 1991, 323: 'Aristote reprend quasi intégralement, en traitant de cette sélection du matériau probable, ce qu'il a dit auparavant des propositions dialectiques. La différence est dans l'intention. Au chapitre 10, il définissait hiérarchiquement la matière endoxale; au chapitre 14, il montre comment s'appuyer sur les degrés de cette hiérarchie en recueillant les endoxes.' See also Albert, *In Top.* 277: 'propositiones quidem eligendum inspiciendo ad principia essentialia et formalia propositionis dialecticae, ex ipsa propositione

τὰς μὲν οὖν προτάσεις ἐκλεκτέον ὁσαχῶς διωρίσθη περὶ
 προτάσεως, ἢ τὰς πάντων δόξας προχειριζόμενον ἢ τὰς
 τῶν πλείστων ἢ τὰς τῶν σοφῶν, καὶ τούτων ἢ πάντων ἢ
 τῶν πλείστων ἢ τῶν γνωριμοτάτων, μὴ τὰς ἐναντίας
 ταῖς φαινομέναις,²⁸ καὶ ὅσαι δόξαι κατὰ τέχνας εἰσὶν.
 (*Top.* I 14.105a34-105b1)²⁹

As we already said, the latter source is close to proposing the opinions of wise men.³⁰

Third, we can propose propositions that contradict the contraries of opinions held as endoxal:

δεῖ δὲ προτείνειν καὶ τὰς ἐναντίας ταῖς φαινομέναις
 ἐνδόξοις κατ' ἀντίφασιν, καθάπερ εἴρηται πρότερον.
 (*Top.* I 14.105b1-3)³¹

Fourth, we can look for statements like the probable ones:

dialectica sumpta penes ea quae cadunt in diffinitione propositionis dialecticae, ut dialectica est propositio.' This is how Albert begins his explanation of the first tool. But we have to see that he calls the 'essential and formal principles of the dialectical proposition' not only the definition of the probable, but everything that was said to have the status of dialectical proposition in Chapter 10.

²⁸ Like Waitz (II, 450) and Brunschwig (p. 130, note 5), from whom comes the translation I furnish, I retain the interpretation that proposes reading μὴ τὰς instead of ἢ τὰς at 105a37. Aristotle would thus be repeating what he said in Chapter 10, there also after having called upon the sayings of the wise as a source of probable opinions, namely, that such can only be taken if they are not in contradiction with common opinion. (See *Top.* I, 10, 104a10-11.) Indeed, as there is no doubt that in 105b1-3, Aristotle is speaking of contraries taken according to contradiction, I would judge that it is very unlikely, in spite of the interpretations of Alexander, Tricot, Forster and Smith, that he is also talking about this in 105a37, repeating it again in 105b1-3.

²⁹ 'Il existe autant de manières de recueillir des prémisses que d'espèces distinguées dans le chapitre que nous avons consacré à la prémisse: on peut retenir les opinions qui sont celles de tous les hommes, ou de presque tous, ou de ceux qui représentent l'opinion éclairée et parmi ceux-ci, celles de tous, ou de presque tous, ou des plus connus, exception faite de celles qui contredisent les évidences communes; et aussi toutes celles qui sont en accord avec la science ou la technique.' Brunschwig translation

³⁰ It is quite certain that in the definition of the endoxal, *sophoi* does not mean the metaphysicians. There is, in fact, too great a distance between ordinary people and the metaphysician. This is clearly a question of those that are competent in a particular art or science. This is, in fact, the first sense of the word *sophos*.

³¹ 'One must put forward the contraries of things which appear to be acceptable as negations, as was said earlier.' Smith translation

χρήσιμον δὲ καὶ τὸ ποιεῖν αὐτὰς ἐν τῷ ἐκλέγειν μὴ
μόνον τὰς οὐσας ἐνδόξους ἀλλὰ καὶ τὰς ὁμοίας ταύταις,
(*Top.* I 14.105b3-5)³²

‘Since what is similar to an acceptable premise is likely to be accepted, it saves time to construct these in advance and add them to the list’, says Smith. This is further away from the statements first seen to be probable than those with the contrary predicate.

Fifth, Aristotle adds a source not seen in chapters 1 and 10: we look for statements that seem true always or most of the time:

ἔτι ὅσα ἐπὶ πάντων ἢ τῶν πλείστων φαίνεται, ληπτέον
ὡς ἀρχὴν καὶ δοκοῦσαν θέσιν· (*Top.* I 14.105b10-11)³³

Here, we do not proceed from opinions in the same way. More emphasis is placed on our looking on reality. Albert also underlines in his own way the fact that this source has not been mentioned in Chapter 10. Furthermore, he proposes an explanation of what follows in the sentence, for Aristotle adds: τιθέασι γὰρ οἱ μὴ συνορῶντες ἐπὶ τίνος οὐχ οὕτως.

Amplius autem sumendae sunt propositiones, non tantum penes ipsa formalia in ipsa propositione dialectica sumpta, sed etiam penes formalia aliunde sumpta: et primo quidem modo sumendae sunt propositiones quae habent probabilitatem in omnibus vel in pluribus et in quibus non videtur instantia, sed verius aliunde sumpta est: quia videntur esse verae vel in omnibus, vel in pluribus: et istae sumendae sunt ut principium syllogismi dialectici, et tanquam verae apparentes propositiones quae nullam habeat instantiam: tunc enim illis sumptis tanquam veris (qui non conspiciunt, quod in aliquo sit instantia propter quam sic non est sicut universaliter proponitur) facilius ponent sive concedent. Unde hoc ipsum est tam instrumentum sumendi propositiones, quam cautela. (Albert, *In Top.* 278)

According to Albert, in fact, this source can serve either for serious dialectical syllogisms, or for the strategies required in discussion with an interlocutor whose predispositions need to be checked out or which are clearly bad. Pacius, who gives the example of mothers who love their children, places the emphasis on the usefulness of this source for premises with a view to discussion rather than for research:

³² ‘It is a useful thing, as well, to produce these premisses while collecting—not only premisses which are actually acceptable, but also premisses which are similar to these’ Smith translation

³³ ‘Moreover, whatever seems to be so in all or most cases should be taken as a starting-point or apparent concession’ Smith translation

Ratio huius praecepti est: quia aduersarius fortasse nullam habet exceptionem in promptu ideoque cogetur propositionem simpliciter concedere. Ut enim dicetur lib. 8. cap. 8. quotiescumque proponitur aliqua propositio, quae plerumque reperitur vera, aduersarius cogitur eam simpliciter concedere quasi semper veram, aut exceptionem aliquam affere. (Pacius, *In Top.* 361)

Maurus goes in the same direction:

quando aliqua propositio plerumque est vera, sumenda est universaliter; ex gr., quia matres plerumque amant filios, sumendum est universaliter, quod matres amant filios. Propositiones enim plerumque veras aduersarius admittit, cum non occurrit instantia in contrarium. (Maurus, *In Top.* 407#1)

But this does not exhaust our resources; we should also look at the written enumeration of opinions:

ἐκλέγειν δὲ χρῆ καὶ ἐκ τῶν γεγραμμένων λόγων, (*Top.* I 14.105b12-13)³⁴

In so far as it refers to the opinions of the wise men or of those in the arts, it does not seem to be another source; it seems, rather, to be a special rule for getting the opinions of the wise. Brunschwig 1967, 131n4 notes that there can be some hesitation about the meaning of γεγραμμένων λόγων, namely, whether it is a question of books, or of collections of arguments, but that what follows in the text seems to favor the first hypothesis. The collection of arguments would be the result of the activity described here.

When one compares Chapters 10 and 14, one notices that all the sources mentioned in Chapter 10, plus one more, the fifth cited above, are to be found in Chapter 14, and that certain of these sources are presented in the inverse order. Indeed, in Chapter 10, one finds, after the source drawn from the definition of the probable, the sources that call upon likenesses, contraries and the arts; whereas in Chapter 14, we find first of all the source calling upon the arts, then those drawn from contraries and likenesses and, finally, from what is observed in most cases. In Chapter 14, Aristotle therefore seems to be going from what is closer to the definition of the probable—the arts—to what is most remote from it—the propositions that resemble probable opinions and formed starting from observations; in Chapter 10, he does the opposite.

³⁴ 'One should also collect premisses from written works' Smith translation

The reason for this is perhaps that when one wants to present a plurality of elements having something in common, it is often better to first present what is naturally further apart before the rest. But when comes the time to manifest the order that exists between them, it is clearly necessary to respect this order. For example, to explain that 'to see' has three meanings, it is better to first contrast the actions of the eye and of the intellect before introducing that of the imagination. It remains, however, that if it is the act of sight that is first named 'to see' the act of the imagination is so named before that of the intellect. Another example: it is certainly better to explain the meanings of 'before' in time and in nobility before presenting the meanings of the word in being and knowledge; but it remains that these latter are named 'before' more properly than what is best.

Returning now to the first tool: it is significant that Aristotle uses the word 'premise' (πρότασις) here in Chapter 14 and in Chapter 13, rather than 'statement' (ἀπόφανσις) or 'opinion' (δόξα). Indeed, probable premise includes probable statement and probable opinion, but adds an order to a conclusion or problem. Aristotle does, in fact, include under this tool the ability not only to procure probable opinions, but also to order them as they pertain to given types of problem. The point is to make them easy to find and to use in the discussion.³⁵

δειν δέ φησι τὰς ἐκλογὰς ποιεῖσθαι μὴ πεφυρμένως ἀλλὰ κατὰ διαγραφὰς³⁶ καὶ χεχωρισμένως καὶ ἰδίᾳ καθ' ἕκαστον γένος· οὕτως γὰρ ἡμῖν ἔσονται χρήσιμοι, εἰδόσιν ἐν οἷς αὐτὰς εὐρεῖν δυνησόμεθα, ὅταν δεηθῶμεν; (Alexander, *In Top.* 92.26-29)

Now, since order implies before and after and that nothing comes before or after itself, distinction or division is presupposed to order. Aristotle thus says two things about dividing the premises and problems according to matter (into the immediate genus and the more remote ones; ethical, natural and logical, a division we already talked about)³⁷ and recommends two

³⁵ The interest of the dialectician in getting probable premises is to be able to discuss problems eventually. But, as we say, the dialectician does not need to have in view one or more determinate problems to be able to carry out a selection of premises and to order them. He does not need a determinate knowledge of the particular problems that he will have to discuss in order to put his tools to work, just as the builder does not need to know already what house he will have to build in order to gather up his materials.

³⁶ "The point of drawing up tables is to make it easy to find these premisses. To that end, we should have an appropriate system of classification." (...) Smith, *Comm.* p. 90.

³⁷ These distinctions are important because premises and conclusions will have to be of the same genus.

things about ordering them (starting with opinions about what something is³⁸ and starting from the general to the particular):

τὰς δὲ διαγραφὰς ποιεῖσθαι περὶ ἐκάστου γένους ὑποτιθέντας χωρὶς, οἷον περὶ ἀγαθοῦ ἢ περὶ ζώου, καὶ περὶ ἀγαθοῦ παντός, ἀρξάμενον ἀπὸ τοῦ τί ἐστίν. παρασημαίνεσθαι δὲ καὶ τὰς ἐκάστων δόξας, οἷον ὅτι Ἐμπεδοκλῆς τέτταρα ἔφησε τῶν σωμάτων στοιχεῖα εἶναι· θεῖη γὰρ ἂν τις τὸ ὑπὸ τινος εἰρημένον ἐνδόξου. (Top. I 14. 105b13-18)³⁹

The 'marginal notes' would be useful if our purpose were to appeal to the authority of an *endox*. They might also be important to someone undertaking to respond in accordance with the views of a well-known philosopher, as Aristotle says in Book VIII 5.

Ἔστι δ'ὡς τύπῳ περιλαβεῖν τῶν προτάσεων καὶ τῶν προβλημάτων μέρη τρία. αἱ μὲν γὰρ ἠθικαὶ προτάσεις εἰσὶν, αἱ δὲ φυσικαί, αἱ δὲ λογικαί. (...) Πρὸς μὲν οὖν φιλοσοφίαν κατ' ἀλήθειαν περὶ αὐτῶν πραγματευτέον, διαλεκτικῶς δὲ πρὸς δόξαν. ληπτέον δ' ὅτι μάλιστα καθόλου πάσας τὰς προτάσεις, καὶ τὴν μίαν πολλὰς ποιητέον, οἷον ὅτι τῶν ἀντικειμένων ἢ αὐτῇ ἐπιστήμη, εἴθ' ὅτι τῶν ἐναντίων καὶ ὅτι τῶν πρὸς τι. τὸν αὐτὸν δὲ τρόπον καὶ ταύτας πάλιν διαιρετέον, ἕως ἂν ἐνδέχεται διαιρεῖν, οἷον ὅτι ἀγαθοῦ καὶ κακοῦ, καὶ λευκοῦ καὶ μέλανος, καὶ ψυχροῦ καὶ θερμοῦ. ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων. (Top. I 14.105b19-21; 30-37)⁴⁰

³⁸ Perhaps we can add there what is said in the *Prior Analytics* about distinguishing the essential predicates from the properties and from the accidents. See I 27.43b1-11.

³⁹ 'and make up tables, listing them separately about each genus, e.g. about good or about animal (and about every <sense of> good), beginning with what it is. One should also make marginal notes on the opinions of particular people, e.g. that it was Empedocles who said that there are four elements of bodies (for someone might concede what was said by a famous person).' Smith translation

⁴⁰ 'In outline, there are three classes of premisses and problems. Some premisses are ethical, some are scientific, and some are logical. (...) For the purposes of philosophy, they should be dealt with in accordance with truth, but dialectically in accordance with opinion. All premisses should be obtained in the most universal form possible, and a single premiss should be made into many (e.g. <the premiss> that the knowledge of opposites is the same <should be made> next <into the premisses> that <the knowledge> of contraries is, and that <the knowledge> of relatives is). Then these premisses are in turn to be divided in the same way, as far as it is possible to divide them (e.g. that <the knowledge of> good and evil, and of white and black, and of cold and hot <are the same>). And similarly for the rest.' Smith translation

Universal propositions are more useful because they contain potentially other propositions: ‘quia quanto communius scimus, tanto ad plura abundabimus’, says Albert (*In Top.* 278a). Pacius and Maurus offer the same explanation as Alexander of the place of Aristotle’s remark on truth and opinion. Why, therefore, take up once again here, in the context of the tool, this distinction that is nonetheless already known? The reason is that if there are natural, ethical and logical problems and premises, as has been said, it is necessary to indicate how the dialectician is distinguished from the first philosopher, who touches in fact on all the sciences, as well as from the naturalist and the moralist:

ex eo, quod dialectica consideret problemata tum moralis, tum rationalia, tum naturalia, videtur, quod confundatur cum Philosophia, in quantum dividitur in naturalem, moralem et rationalem adeoque complectitur omnes scientias. Respondet Aristoteles dialecticam distingui a philosophia per hoc, quod licet dialecticus versetur circa res omnes et circa omnia problemata, sicut philosophus scientificus, adhuc differunt in modo considerandi. Philosophus enim non est contentus apparentia, sed quaerit propria principia et proprias causas rerum; dialecticus e converso contentus est quadam apparentia veri et procedit ex communibus et probabilibus, quae causant solam opinionem. (Maurus, *In Top.* 407#4)⁴¹

THE SECOND TOOL: THE DISTINCTION AND ORDER OF ITS PLACES (CHAPTER 15)

Alexander also speaks of places and starting-points under this tool:

παραδίδωσι τόπους ἡμῖν τινας καὶ ἀφορμάς, δι’ ὧν γνωρίζειν δυνασόμεθα, εἴτε τῶν πολλαχῶς λεγομένων ἐστὶ τὸ προκείμενον εἴτε καὶ μοναχῶς λέγεται. (Alexander, *In Top.* 96.26-28)

It seems in fact more convenient to speak of ‘places’ under this tool. Pacius, Maurus, De Pater and Pelletier do so.⁴² Brunschwig also:

ce livre I contient lui-même des lieux. L’un des quatre “instruments” (organa) dialectiques (...) consiste à savoir reconnaître si un terme se prend ou non en plusieurs acceptions spécifiquement distinctes; Aristote énumère, dans le chapitre 15, plusieurs moyens de résoudre ce genre de questions. Or ces moyens sont de nature tout à fait comparable aux lieux qui seront exposés dans les livres suivants; (1967, xxxviii, n1)

⁴¹ See also Alexander, *In Top.* 95.19-31, and Pacius, *In Top.* 361#7.

⁴² See De Pater 1968, 185; 1965, 155-158; Pelletier 1991, 334-335.

But the tools have the task of furnishing immediate endoxes, so that the dialectician might have in his possession whatever is needed to establish his arguments. The operation that the tools regulate is thus the immediate apprehension of the probable nature of the statements. In this respect they differ from the places which perfect the act of arguing. Whence there is reason to be surprised to find places as parts of a tool. In fact, the chapter devoted to the second tool is largely concerned with the *problem* of homonymy, that is, to the not immediate discovery of homonymy, and to the enumeration of the places ordered to this.

The fact is that there are immediately endoxal statements expressing a state of homonymy. These would be properly the object of the second tool, and it is in respect to these only that Aristotle devotes the one paragraph of this chapter actually concerned with the second tool (106a1-8), where he gives the advice not to be satisfied with noting endoxal homonymy, but also to seek out the definitions proper to each of the cases.⁴³ But insofar as whether or not a word is homonymous can be the object of a problem, one will also have to argue to show that this is so. And this will call upon the use of places, especially proper ones, particularly adapted to judging homonymy.⁴⁴ The rest of Chapter 15 lists and explains such places, and thus does not pertain to the second tool as such.

This is certainly an exception to the general order of the *Topics*, since Aristotle, immediately after the description of the tool and the instructions tied to it for the immediate collecting of homonymies, proceeds directly to an enumeration of the places adapted to examining problematic cases of homonymy. But the advantages of such a procedure are rather evident: homonymy is a problem that is almost always instrumental, arising at the beginning of the discussion of another problem.

Here is, schematically and summarily, how we might distinguish the places of the second tool:

1) Places by opposites

⁴³ The second tool does include two distinct abilities: being able to tell whether a word has different meanings and knowing what these meanings are.

⁴⁴ Il est à noter que la même chose vaut pour les autres instruments. Si quelque proposition simple ou si quelque proposition faisant état d'une différence ou d'une ressemblance faisait problème, il faudrait l'établir ou la détruire à partir d'autres endoxes, en usant aussi de lieux. La différence est que les chapitres 14, 16 et 17 ne paraissent pas faire suivre la présentation des instruments et des règles pour les manières de lieux propres permettant de conclure que tel attribut appartient à tel sujet ou que telle est la différence ou la ressemblance entre deux sujets.

By contraries

One word has more than one contrary in name and/or meaning⁴⁵

One word sometimes has a contrary; sometimes, not⁴⁶

If contraries, they sometimes have an intermediary, sometimes not; or not the same; or sometimes many and sometimes one⁴⁷

⁴⁵ πρῶτον μὲν ἐπὶ τοῦ ἐναντίου σκοπεῖν εἰ πολλαχῶς λέγεται, ἂν τε τῷ εἶδει ἂν τε τῷ ὀνόματι διαφωνῇ (*Top.* I 15.106a10-12). See Alexander, *In Top.* 98.6-8: 'Ἀπὸ τῶν ἀντικειμένων ἀφορμὰς παραδιδούς τῆς τῶν πολλαχῶς λεγομένων εὐρέσεώς τε καὶ κρίσεως πρῶτον, πῶς ἀπὸ τῶν ἐναντίων οἶόν τε γνωρίζειν τι πολλαχῶς λεγόμενον, δείκνυσι. See Maurus, *In Top.* 408#2: 'Primus locus seu prima maxima desumitur ex contrario et est: cum aliquid habet contrarium, quod dicitur multipliciter, etiam ipsum dicitur multipliciter. Porro dupliciter potest contingere, ut contrarium alicujus dicatur multipliciter: primo nomine et significatione; secundo sola significatione, non autem nomine.'

⁴⁶ Ἐτι εἰ τῷ μὲν ἔστι τι ἐναντίον τῷ δ' ἀπλῶς μηδέν· (*Top.* I 15.106a36). Such a word would necessarily have many meanings since, as Alexander explains it, taking an example from Aristotle, the thing it designates that does not have a contrary must differ specifically from the other thing that it designates, but which does have a contrary: Δεύτερον τόπον τῆς τοῦ πολλαχῶς λεγομένου εὐρέσεως ὄντα καὶ αὐτὸν ἀπὸ τῶν ἐναντίων ἐκτίθεται τοῦτον, εἰ τῶν σημασινομένων ὑπὸ τοῦ προκειμένου, περὶ οὗ ἡ ζήτησις εἶτε πολλαχῶς λέγεται εἶτε μή, τῷ μὲν εἶη τι ἐναντίον τῷ δὲ μηδέν· δηλὸν γὰρ ὅτι τῶν πλεοναχῶς λεγομένων ἔσται τοῦτο, σημαίνόν γε φύσεις διαφόρους. οἶον ἐπὶ ἡδονῆς, ἐπεὶ τῇ μὲν ἀπὸ τοῦ πίνειν ἡδονῆ ἔστιν ἐναντία λύπη ἢ ἀπὸ τοῦ διψῆν, τῇ δὲ ἀπὸ τοῦ θεωρεῖν ἢ τῶν κατὰ γεωμετρίαν τι, οἶον ὅτι ἡ διάμετρος ἀσύμετρος τῇ πλευρᾷ, ἢ τῶν κατὰ φιλοσοφίαν τι ἢ τῶν κατὰ τινα ἄλλην ἐπιστήμην μηδέν ἔστιν ἐναντίον, ἢ ἡδονῆ ἔσται τῶν πολλαχῶς λεγομένων· διαφέρει γὰρ κατ' εἶδος τὸ ᾧ μηδέν ἔστιν ἐναντίον τοῦ ἔχοντός τι ἐναντίον (100.17-27). See Albert, *In Top.* 281: 'Amplius considerandum est in his quae non in utroque significato habent contrarium, si dicto de uno est contrarium, et dicto de alio non est contrarium: constat enim quod multipliciter dicitur quod sic de diversis dicitur (...) Ad praesentem intentionem sufficit scire tali signo quod in uno sensu habet contrarium, in alio autem non, quod ipsum aequivocum'

⁴⁷ ἔτι ἐπὶ τῶν ἀνὰ μέσον, εἰ τῶν μὲν ἔστι τι ἀνὰ μέσον τῶν δὲ μηδέν, ἢ εἰ ἀμφοῖν μὲν ἔστι <τι>, μὴ ταῦτόν δέ. (...) ἔτι εἰ τῶν μὲν πλείω τὰ ἀνὰ μέσον, τῶν δὲ ἔν, (*Top.* I 15. 106b4-6; 9-10). See Alexander, *In Top.* 101.23-24: εὐρίσκωμεν τῶν σημασινομένων ὑπ' αὐτῶν τὰ μὲν ἔμμεσα ὄντα τὰ δὲ ἄμεσα, ἑκάτερον τῶν ἐναντίων τῶν εἰλημμένων ὁμώνυμον ἐροῦμεν εἶναι· (...) καθόλου γάρ, ἂν τε τῶν μὲν ἢ τι ἐναντίων τῶν δὲ μή, ἂν τε τῶν μὲν πλείω τῶν δὲ ἔν ἢ ἢ ὅλως διαφέροντα καὶ μὴ τὰ αὐτά, ὁμώνυμα ἔσται τὰ ἐν ταῖς τοιαύταις διαφοραῖς ἐναντία.

By contradictories: if one has more than one meaning⁴⁸***By privation and possession: if one has more than one meaning***⁴⁹

Now, why wouldn't there be also a place of relatives among the places of opposites? Surely, if 'father' has more than one meaning, so does 'son' and vice-versa. According to Alexander, Aristotle did not mention the relatives because it is too evident that they also lend themselves to this way of proceeding. If a word names many things that are relative (i.e., what they are is to be of or towards others) according to different meanings, then its correlatives will also be said in many ways, if named by a same word:

εἰπῶν δὲ καὶ περὶ τῶν κατὰ στέρησιν καὶ ἕξιν ἀντικειμένων, οὐκέτι τῶν κατὰ πρὸς τι ἀντικειμένων ἐμνημόνευσε· πρόδηλον γὰρ ἐπ' ἐκείνων ἀπ' αὐτοῦ τοῦ τῶν πρὸς τι λόγου ὅτι ἀνάγκη, ἂν θάτερον αὐτῶν λέγεται πλεοναχῶς, καὶ θάτερον οὕτω λέγεσθαι, ἐπεὶ τοῖς πρὸς τι τὸ εἶναι ταυτόν ἐστι τῷ πρὸς τί πως ἔχειν. διό, ἐπεὶ τὸ φιλητὸν πλεοναχῶς, καὶ ἡ φιλία τοσαυταχῶς εἴη ἂν φιλία πρὸς τὸ φιλούμενον. (Alexander, *In Top.* 103.16-22)

Thus, Alexander gives as an example relatives concerning which we have already seen that the relation has been useful to Aristotle to distinguish the kinds of friendship.⁵⁰ Aristotle would thus have made use of the second tool, dividing the meanings of the word 'lovable' in order to determine the three possible objects of friendship. For, it is starting with the many kinds of

⁴⁸ Πάλιν ἐπὶ τοῦ κατ' ἀντίφασιν ἀντικειμένου σκοπεῖν εἰ πλεοναχῶς λέγεται· εἰ γὰρ τοῦτο πλεοναχῶς λέγεται, καὶ τὸ τοῦτῳ ἀντικείμενον πλεοναχῶς ῥηθήσεται (*Top.* I 15.106b13-15. See Alexander, *In Top.* 102.5-7: Παραδοὺς ἡμῖν τόπους τῆς τῶν ὁμωνύμων εὐρέσεως ἀπὸ τῶν ἐναντίων, πάλιν ἀπὸ τῶν κατ' ἀντίφασιν ἀντικειμένων παραδίδωσι, καὶ φησιν 'εἰ τὸ κατ' ἀντίφασιν τινι ἀντικείμενον πολλαχῶς λέγεται, καὶ αὐτὸ πολλαχῶς'. See also Albert, *In Top.* 282, on the situation of the place of contradiction after that of the contraries: 'Rursum non tantum inspiciendo in contraria et media invenitur multipliciter distinctio, sed etiam inspiciendo in contrarium est generalior, quam inspiciendo in contradictionem: quia contradictio non opponitur termino simplici, sed complexo.'

⁴⁹ Ἔτι, ἐπὶ τῶν κατὰ στέρησιν καὶ ἕξιν λεγομένων ἐπισκοπεῖν· εἰ γὰρ θάτερον πλεοναχῶς λέγεται, καὶ τὸ λοιπὸν (*Top.* I 15.106b21-23). See Alexander, *In Top.* 102.24-26: Μεταβέβηκεν ἐπὶ τὰ κατὰ στέρησιν καὶ ἕξιν ἀντικείμενα, καὶ λέγει καὶ ἐπὶ τούτων 'ἂν θάτερον αὐτῶν πλεοναχῶς λέγεται, καὶ θάτερον πλεοναχῶς ῥηθήσεται'.

⁵⁰ See *supra* note 4.

φιλητά that he concludes to that of φιλία. Furthermore, this division is the same, almost to the word, as that in *Topics* I 13.105a26-7.

2) Places by cases: if one case or the word from which it is formed has more than one meaning⁵¹

Alexander describes the place thus:

ἔστι δὴ ὁ παραδιδόμενος τόπος τοιοῦτος· ἂν ἡ πτώσις
τινος ἢ ὁπωσοῦν λεγομένη πλεοναχῶς, καὶ αὐτὸ
πλεοναχῶς, καὶ εἰ αὐτό, καὶ ἡ πτώσις. (Alexander, *In Top.*
104.16-18)

Nonetheless, according to him the place seems to only apply to those πτώσεις that are adverbs formed from adjectives:

αὐτὰ μὲν οὖν ἔσται τὰ οὕτως ἔχοντα, ὡς τὸ δίκαιον, τὸ
ὑγιεινόν, τὸ μουσικόν, τὸ ἀνδρείον· πτώσεις δὲ τούτων
τὸ ἀνδρείως, τὸ δικαίως, τὸ ὑγιεινῶς, τὸ μουσικῶς. ἐν
ὁποτέρῳ ἂν οὖν φανερόν ἢ τὸ πολλαχῶς, ἀπὸ τούτου
δεικνύοιτο ἂν καὶ τὸ λοιπόν. (Alexander, *In Top.* 105.13-16)

In fact, Alexander does not apply this way of verifying to all the names of the same family (*sustoixia*). For example, he explains, if 'healthily' has many meanings, nothing requires 'health' to have as many. Whence, we can readily understand that he excludes paronyms as a class. And although it is true that if 'health' has many senses, 'healthy' will also, the inverse is not so. The place would thus consist always in the fact that if the declension having adverbial value has many meanings, the original having adjectival value will also have many; and if the original has many meanings, the declension will also.⁵²

With Albert, it is clear that the 'cases' involved with this place are only adverbs:

⁵¹ Ἔτι δ' ἐπὶ τῶν πτώσεων ἐπισκεπτέον. (...) ὅταν αὐτὸ πλεοναχῶς λεγῆται, καὶ ἡ πτώσις ἢ ἀπ' αὐτοῦ πλεοναχῶς ῥηθήσεται, καὶ εἰ ἡ πτώσις, καὶ αὐτό (*Top.* I 15.106b29; 38-40).

⁵² The declension gives all the cases or 'fallings away' from the nominative, which the Latins called the *casus rectus*, or upright case. In paronymy, the derived adjective can first be considered as a *casus rectus* in relation to the adverb formed from it, which is then its only 'case'. Aristotle seems to be taking it in this sense.

considerandum est in casibus secundum quod casus est inflexio nominis in adverbium, quia cadit a principali a quo formatur, ut si juste multipliciter dicitur quod est casus, et justum multipliciter dicitur quod est principale, per cuius inflexionem sumitur casus (...) si ipsum principale multipliciter dicitur, et casus ab eo per inflexionem formatur multipliciter dicitur. (Albert, *In Top.* 283)

But reading Aristotle himself in Chapter 9 of Book II gets rid of all doubt. He in fact distinguishes clearly the cases (πτῶσεις) of the coordinates (σύστοιχα). Are called coordinates, he explains, terms of the same series, such as these: 'just' actions and the 'just' man are coordinated under 'justice'; 'courageous' actions and the 'courageous' man, under 'courage'. Likewise again, things that tend to produce or to conserve something else are coordinate with what they tend to produce or conserve. For example, 'healthy' things with 'health'. However:

πτῶσεις δὲ οἷον τὸ δικαίως καὶ ἀνδρείως καὶ ὑγιεινῶς καὶ ὅσα τοῦτον τὸν τρόπον λέγεται. (*Top.* II 9.114a33-34)⁵³

A passage about which Alexander says:

τίνα δ' ἐστὶ σύστοιχα καὶ τίνα πτώσεις, καὶ ὅτι καὶ αἱ πτώσεις ἐν τοῖς συστοίχοις καταριθμοῦνται (αἱ μὲν γὰρ πτώσεις καὶ σύστοιχα, τὰ δὲ σύστοιχα οὐκέτι πτώσεις), καὶ αὐτὸς φανερώς διὰ τῶν παραδειγμάτων δεδήλωκε. (*In Top.* 196.27-30)

Thus, the πτώσεις are a species of σύστοιχα. Aristotle continues indeed:

δοκεῖ δὲ καὶ τὰ κατὰ τὰς πτώσεις σύστοιχα εἶναι, οἷον τὸ μὲν δικαίως τῇ δικαιοσύνῃ, τὸ δὲ ἀνδρείως τῇ ἀνδρείᾳ. σύστοιχα δὲ λέγεται τὰ κατὰ τὴν αὐτὴν συστοιχίαν ἅπαντα, οἷον δικαιοσύνη, δίκαιος, δίκαιον, δικαίως. (*Top.* II 9.114a34-38)⁵⁴

Therefore:

⁵³ 'inflected forms' are such words as 'justly', 'courageously' and 'healthily' and other words formed in this way.' Forster translation

⁵⁴ 'Inflected forms are usually regarded also as coordinates, for example, 'justly' as a co-ordinate of 'justice' and 'courageously' of 'courage'. All words which are in the same co-ordinate series are called co-ordinates, for example, 'justice', 'just man', 'just action' and 'justly'.' Forster translation

διαφέρει δ' ἂν τὰ σύστοιχα τῶν πτώσεων, ὅτι ἐκεῖνα μὲν πράγματά τινά ἐστίν, αἱ δὲ πτώσεις οὐ πραγμάτων ὑποκειμένων εἰσὶ δηλωτικαὶ ἀλλὰ τρόπου ἐνεργείας ἢ διαθέσεώς τινος· τοιαῦτα γὰρ καὶ τὰ ἰατρικῶς καὶ μουσικῶς καὶ ὑγεινῶς. (Alexander, *In Top.* 197.22-24)

This does not mean that this technique never works for paronyms, but it only works in one direction. We can find an example of the use that Aristotle sometimes makes of it in Chapter 12 of Book V of the *Metaphysics*. There he affirms that since 'potency' is said in so many ways, 'potent' will also be said in so many ways:

Λεγομένης δὲ τῆς δυνάμεως τσσαυταχῶς, καὶ τὸ δυνατόν ἓνα μὲν τρόπον λεχθήσεται τὸ ἔχον κινήσεως ἀρχὴν ἢ μεταβολῆς (*Metaph.* V 12.1019a33-34)⁵⁵

Likewise, in however many ways 'impotency' is said, in so many ways 'impotent' will be said:

καὶ ἀδύνατα δὴ τὰ μὲν κατὰ τὴν ἀδυναμίαν ταύτην λέγεται (*Metaph.* V 12.1019b21-22)⁵⁶

3) *By genera, definition and differences.* ⁵⁷

By genera

⁵⁵ 'Since "potency" has all these meanings, "potent" (or "capable") will mean (a) that which contains a source of motion or change' Tredennick translation. See Alexander, *In Metaph.* 390.36-39: Λεγομένης δὲ τῆς δυνάμεως τσσαυταχῶς (τετραχῶς γάρ, ἢ ποιητική, ἢ παθητική, ἢ ἕξις καὶ ἢ κατὰ τὴν ἀπάθειαν), ἐπεὶ τὸ δυνατόν ἀπὸ τῆς δυνάμεως καὶ τοῦ ταύτην ἔχειν παρωνόμασται, εἰπὼν περὶ τῶν δυνάμεων τῶν σημαινομένων, ἐφεξῆς περὶ τῶν τοῦ δυνατοῦ λέγει.

⁵⁶ See Alexander, *In Metaph.* 394.8-11: εἰπὼν δὲ περὶ ἀδυναμίας καὶ ἀδύνατά φησιν, ἃ καὶ αὐτὰ δοκεῖ παρωνομάσθαι τῇ ἀδυναμίᾳ· τὰ μὲν γὰρ κατὰ τὴν προειρημένην ἀδυναμίαν λέγεσθαι, ὡς ἐκάστης ἀδυναμίας παρουσία ἀδύνατόν τι λέγεσθαι,

⁵⁷ Albert also puts the first four places together under one class of the opposites (see *In Top.* 232), like Alexander. I already said that his explanation of the place of the πτώσεις seems to me clearer. Finally, his introduction to the third group of places is incontestably better: 'Distinctorum sic inventa multiplicitate, inspiciendum in diversum ab eo quod distinguitur: invenianda est etiam inspiciendo in idem ei quod distinguitur, sicut diffinitum et diffinitio sunt idem secundum quod diversa sunt genus et differentia' (283a).

By the highest genera (the categories) of those the name is said of: if those are not the same⁵⁸

By the genera of those the name is said of: if those are not the same and not subordinated⁵⁹

By the genera of those the contrary is said of: if those are not the same and not subordinated⁶⁰

By definitions

⁵⁸ Σκοπεῖν δὲ καὶ τὰ γένη τῶν κατὰ τοῦνομα κατηγοριῶν, εἰ ταυτὰ ἐστὶν ἐπὶ πάντων· εἰ γὰρ μὴ ταυτὰ, δῆλον ὅτι ὁμώνυμον τὸ λεγόμενον (*Top.* I 15.107a3-5). See Alexander, *In Top.* 105.19-21; 23-25: Δεῖν φησὶν ἐπισκοπεῖν καὶ τὰ γένη τῶν κατηγοριῶν, ὅφ' ἄς ἐστὶ τὰ ὑπὸ ταύτων ὄνομα, τοῦτ' ἐστὶ τὰς κατηγορίας· ταῦτα δὲ ἐστὶ τὰ ἀνωτάτω γένη. (...) ἂν γὰρ ὑπὸ πλείους κατηγορίας ἢ τὰ σημαίνόμενα ὑπ' αὐτοῦ καὶ πλείους αὐτοῦ κατηγορῶνται, ὁμώνυμον ἔσται.

⁵⁹ Σκοπεῖν δὲ καὶ τὰ γένη τῶν ὑπὸ τὸ αὐτὸ ὄνομα, εἰ ἕτερα καὶ μὴ ὑπ' ἄλληλα. (...) ἐὰν δὲ ὑπ' ἄλληλα τὰ γένη ἢ, οὐκ ἀναγκαῖον ἐτέρους τοὺς λόγους εἶναι (*Top.* I 15.107a18-19; 21-23). See Alexander, 107.14-22: Προστίθησι τῷ προειρημένῳ τόπῳ ὄντι ἀπὸ τῶν γενῶν καὶ τοῦτον ὄντα μὲν καὶ αὐτὸν ἀπὸ τῶν γενῶν, οὐ μὴν τὸν αὐτὸν ἐκείνῳ· ἐκεῖνος μὲν γὰρ ἦν ἀπὸ τῶν ἀνωτάτω γενῶν, ἄς κατηγορίας λέγει, οὗτος δὲ καθόλου λαμβάνεται, εἰ ὑπὸ διαφέροντα γένη τὰ σημαίνόμενα ὑπὸ τοῦ ὀνόματος καὶ μὴ ὑπ' ἄλληλα. ἔσται γὰρ τῶν πολλαχῶς λεγομένων, εἰ οὕτως ἔχοι· οὐ γὰρ μόνον τὰ ὑπὸ διαφόρους κατηγορίας ὁμώνυμα, ἀλλὰ καὶ ὑπὸ μίαν ἢ κατηγορίαν τὰ σημαίνόμενα ὑπὸ τοῦ ὀνόματος, ὑπὸ μέντοι διαφέροντα γένη τῶν ὑπὸ τὴν αὐτὴν κατηγορίαν ὄντων ἕκαστον αὐτῶν, εἰ καὶ μὴ εἴη τὰ γένη ταῦτα ὑπ' ἄλληλα, καὶ οὕτως ὁμώνυμα. See also Pacius, *In Top.* 363: 'Hic locus a praecedenti differt eo tantum, quod in precedenti consideratur genus remotissimum, id est, genus generalissimum; in hoc autem spectatur genus proximum.'

⁶⁰ Σκοπεῖν δὲ μὴ μόνον ἐπὶ τοῦ προκειμένου εἰ ἕτερα τὰ γένη καὶ μὴ ὑπ' ἄλληλα, ἀλλὰ καὶ ἐπὶ τοῦ ἐναντίου· εἰ γὰρ τὸ ἐναντίον πολλαχῶς λέγεται, δῆλον ὅτι καὶ τὸ προκείμενον (*Top.* I 15.107a32-35). See Alexander, *In Top.* 108.11-18: Δεῖν φησὶ μὴ μόνον ἐπὶ τοῦ προκειμένου ζητεῖν εἰ τὰ σημαίνόμενα ὑπ' αὐτοῦ ἐτέρων ἐστὶ γενῶν καὶ μὴ ὑπ' ἄλληλα, ἀλλὰ καί, εἰ ἐναντίον ἐστὶ τι τῷ προκειμένῳ, καὶ ἐπ' ἐκείνου ταῦτο ζητητέον, εἰ τὰ ὑπ' αὐτὸ ἐτέρων γενῶν ἐστὶ καὶ μὴ ὑπ' ἄλληλα ὄντων. δεικνύοιτο γὰρ ἂν οὕτως ἐκεῖνο τῶν πολλαχῶς λεγομένων· εἰ δὲ ἐκεῖνο δειχθείη πολλαχῶς λεγόμενον, ἔσται καὶ τὸ προκείμενον δεδειγμένον ὅτι ὁμώνυμόν ἐστι, τῷ κείσθαι ἡμῖν, ἂν τὸ ἐναντίον τινὶ πολλαχῶς λέγηται, καὶ ἐκεῖνο τῶν πολλαχῶς λεγομένων εἶναι.

By the definitions of the name in composition: if one removes what is proper in each case and there is not the same definition remaining⁶¹

Look at the parts of the definition: if one word has not always the same sense⁶²

By whether comparable as more and less or like: if they can not be⁶³

By differences

As Alexander presents it, these places are based upon some truth given in the *Categories*: differences of genera that are other and not subordinate are other:

⁶¹ Χρήσιμον δὲ καὶ τὸ ἐπὶ τὸν ὀρισμὸν ἐπιβλέπειν τὸν τοῦ συντιθεμένου γιγνόμενον, (...) ἀφαιρουμένου γὰρ τοῦ ἰδίου τὸν αὐτὸν λόγον δεῖ λείπεσθαι. τοῦτο δ' οὐ συμβαίνει ἐπὶ τῶν ὁμωνύμων, (*Top.* I 15.107a36-37; 38-39). See Alexander, *In Top.* 108.29-109.5: ὅταν ὄνομά τι κατὰ πλειόνων κατηγορηται, ἄδηλον δὲ ἢ πότερον ταῦτα τὰ ὑπὸ τὸ κοινὸν ὄνομα ὁμωνύμως ἀλλήλοις λέγεται ἢ συνωνύμως, δεῖ, φησίν, ἕκαστον λαμβάνοντας τούτων, καθ' ὧν κατηγορεῖται, μετὰ τοῦ κοινοῦ ὀνόματος ὀρίζεσθαι, ἔπειτα ἐκ τῶν ὀρισμῶν τῶν τοῦ συνθέτου τὸν ἴδιον ἕκαστου λόγον τῶν εἰς τὸ κοινὸν ὄνομα προσκειμένων ἀφελόντας ὄραν τὸν καταλειπόμενον λόγον, εἰ ὁ αὐτός ἐστιν ἐν ἀμφοτέροις. εἰ μὲν γὰρ ὁ αὐτός, οὐχ ὁμώνυμον ἔσται τὸ ζητούμενον· εἰ δὲ μὴ ὁ αὐτός, ὁμώνυμον. See also Pacius, *In Top.* 364: 'Si duo conjuncta definiantur separatim et sublatis propriis non maneat utrobique eadem definitio, verbum est multiplex.'

⁶² Πολλάκις δὲ καὶ ἐν αὐτοῖς τοῖς λόγοις λανθάνει παρακολουθοῦν τὸ ὁμώνυμον· διὸ καὶ ἐπὶ τῶν λόγων σκεπτέον (*Top.* I 15.107b6-7). See Alexander, *In Top.* 110.1-6: Πολλάκις δέ, φησί, καὶ ἐν τοῖς λόγοις τε καὶ διορισμοῖς τοῖς λαμβανομένοις ἢ τῶν συκκειμένων ἢ ὅλως τούτων, ἃ ζητοῦμεν εἰ πολλαχῶς λέγεται, λανθάνει παρακολουθοῦσα ἢ ὁμωνυμία, ὡς μήπω κατάδηλον εἶναι τὸ προκείμενον ὅτι ἐστὶ τῶν πολλαχῶς λεγομένων. διὸ οὐ δεῖ ἀφίστασθαι, ἀλλὰ ζητεῖν πάλιν καὶ τοῦ ἐν τῷ ὀρισμῷ κοινοῦ λόγου ποῖον τὸ ἴδιον· οὕτως γὰρ εὔρεθήσεται αὐτῶν ἢ πρὸς ἀλλήλα διαφορά.

⁶³ Ἔτι εἰ μὴ συμβλητὰ κατὰ τὸ μᾶλλον ἢ ὁμοίως, (...) τὸ γὰρ συνώνυμον πᾶν συμβλητόν· ἢ γὰρ ὁμοίως ῥηθήσεται ἢ μᾶλλον θάτερον (*Top.* I 15.107b13; 16-18). See Alexander, *In Top.* 111.7-24: καὶ τοῦτον τὸν τόπον πρὸς τὴν ἐπίκρισιν τε καὶ εὔρεσιν τῶν πολλαχῶς λεγομένων παραδίδωσι, τὸν ἀπὸ τῆς συγκρίσεως. ἐπεὶ γὰρ πάντα τὰ τοῦ λόγου τε καὶ εἴδους κοινωνοῦντα συμβλητὰ ἐστὶν ἀλλήλοις καὶ συγκριτικά (...), εἰ δὲ τὰ μετέχοντα τοῦ αὐτοῦ συγκριτικά, τὰ μὴ συγκριτικά δὴλον ὅτι οὐκ ἂν μετέχοι τοῦ αὐτοῦ. δεῖ οὖν, φησίν, ἐπιβλέπειν ἐπὶ τὰ ὑπὸ ἑνὸς τινος ὀνόματος σημαίνόμενα, εἰ κατὰ τὸ σημαίνόμενον ὑπὸ τοῦ ὀνόματος καθ' ἕκαστον αὐτῶν μὴ ἐστὶ συμβλητὰ· ἂν γὰρ μὴ ἦ, ὁμώνυμον ἔσται τὸ ὄνομα, ὃ κοινὸν ἔχοντα ταῦτα οὐκ ἔστιν ἀλλήλοις κατ' αὐτὸ συμβλητὰ.

ὅτι τῶν ἐτέρων γενῶν καὶ μὴ ὑπ' ἄλληλα τεταγμένων ἕτεροι τῷ εἶδει καὶ αἱ διαφοραί, εἴρηκεν ἐν κατηγορίαις· ἀπὸ δὴ τούτου τόπον τινὰ ἡμῖν παραδίδωσι πρὸς εὕρεσιν τῶν πολλαχῶς λεγομένων. (*In Top.* 112.6-8)⁶⁴

If one word designates differences of diverse genera not subordinated⁶⁵

If one word designates things which have diverse differences⁶⁶

If one word designates a difference and a species.⁶⁷

One thus obtains a division into three from the more extrinsic and common to the more intrinsic and less common. Albert also seems to suggest that the place of the contraries is more used (*In Top.* 280). Also the third place under genera presupposes the place of contrary:

⁶⁴ See *Cat.* 3.

⁶⁵ Ἐπεὶ δὲ τῶν ἐτέρων γενῶν καὶ μὴ ὑπ' ἄλληλα ἕτεροι τῷ εἶδει καὶ αἱ διαφοραί (...) σκοπεῖν εἰ τὰ ὑπὸ τὸ αὐτὸ ὄνομα ἐτέρων γενῶν καὶ μὴ ὑπ' ἄλληλα διαφοραί εἰσιν, (*Top.* I 15.107b19-20; 21-23). See Alexander, *In Top.* 112.8-13: ἂν γὰρ τι ὄνομα κατὰ πλειόνων κατηγορῆται, ἂ διαφοραί εἰσι διαφερόντων γενῶν καὶ μὴ ὑπ' ἄλληλα ὄντων, ὁμώνυμον ἔσται τὸ ταῦτα σημαίνον ὄνομα· τῷ γὰρ διαφερόντων εἶναι γενῶν διαφορὰς ταῦτα καὶ ἕτερα τῷ εἶδει ἀλλήλων ἔσται, ἐπεὶ τῶν ἐτέρων γενῶν καὶ μὴ ὑπ' ἄλληλα τεταγμένων ἕτεροι τῷ εἶδει καὶ αἱ διαφοραί.

⁶⁶ Πάλιν εἰ αὐτῶν τῶν ὑπὸ τὸ αὐτὸ ὄνομα ἕτεροι αἱ διαφοραί, (...) τῶν γὰρ αὐτῶν αἱ αὐταὶ διαφοραί. (*Top.* I 15.107b27-28; 31-32). See Alexander, *In Top.* 112.28-113.6: πάλιν δείκνυσι τὸ τῶν γενῶν ὄνομα τῶν πολλαχῶς λεγομένων ὄν, ἂν ὧσι τῶν ὑπ' αὐτοῦ σημαινομένων ἕτεροι διαφοραί. (...) εἰ γὰρ τῶν ἐτέρων γενῶν ἕτεροι διαφοραί, καὶ ὧν ἕτεροι διαφοραί, ταῦτα ἕτερα.

⁶⁷ Ἐτι ἐπεὶ τὸ εἶδος οὐδενός ἐστι διαφορά, σκοπεῖν τῶν ὑπὸ τὸ αὐτὸ ὄνομα εἰ τὸ μὲν εἶδος ἐστι τὸ δὲ διαφορά· (*Top.* I 15.107b33-34). See Alexander, *In Top.* 113.19-24: Δεῖν φησι καὶ τοῦτο ἐπισκοπεῖν, εἰ τῶν ὑπὸ τοῦ αὐτοῦ σημαινομένων ὀνόματος τὸ μὲν εἶδος τινός ἐστι τὸ δὲ διαφορά. εἰ γὰρ εἴη τι σημαίνον τοιαῦτα, ὁμώνυμον ἂν εἴη, ἐπεὶ τὸ εἶδος τινος οὐχ οἷον τε διαφορὰν εἶναί τινος· τὸ μὲν γὰρ ποιητικόν ἐστίν εἶδους, ἢ διαφορά, τὸ δὲ γινόμενον ὑπ' αὐτῆς, τὸ εἶδος, καὶ τὸ μὲν ἐν τῷ τί ἐστι κατηγορεῖται, τὸ εἶδος, τὸ δὲ ἐν τῷ ποῖόν τί ἐστι.

Tertius locus a genere, merito ponitur ordine postremus, quia non simpliciter sumitur a genere, sed a genere contrariorum; ideoque partim dici potest locus a genere, partim a contrariis. (Pacius, *In Top.* 363#13)

How are the places presented by the commentators? We find this same division in Albert, except that it is not clear whether he puts the place of the more or the less among the places of the definition. It is not clear in Alexander either. Nor is it clear either that he puts together the places of the genus, of the definition, and of the difference, and that he groups the last place with those of the difference. It's the same for Maurus. Pacius differs even more. He makes two places out of the first place of the contraries. He also separates the place of the more or less from those of the definition, and the last place of the difference from the first two. Furthermore, he does not put together the places of the definition with those of the genus and the difference.

In part at least, Smith divides Chapter 15 as we do:

we find first a discussion of “opposites” (106a10-b28) subdivided into contraries (106a10-b12) negations (106a13-20) and privation/possession (106a21-8); next, inflections (106a29-107a2); and a brief mention of rules involving “more and less” (107b13-18). (1997, 93)

One may wonder why, in his division, Smith ignores the places enumerated by Aristotle between 107a2 and what he calls ‘more or less’ in 107b13. He too seems, nonetheless, to identify there, among others, places drawn from the categories:

107a3-17. Suppose that N applies both to X and to Y. We may then ask: what *category* of thing is N in X and in Y respectively? If the answers are different, then X and Y are only equivocally N (...) Suppose that N is “good”, X is food, and Y is a soul. Then, X is called good in virtue of being productive of something, but Y is so called in virtue of being of a certain sort. This is a distinction of “category” since the first falls under action, the second under quality. We get the same results if we let X be medicine, or if we let Y be a person. (1997, 97)

Further, what Smith calls ‘more or less’ is only the third part of what we called the places of the definition, and he mentions nothing of what we call the places of the difference.

Frappier’s division is different, but I find that his first division into two is worth being looked at: ‘soit on considère un autre terme que celui qui est en question; soit on considère le terme en question par rapport aux choses dont il se dit’. Under the first member, he includes the opposites and what he calls ‘le terme semblable’, which is the place of the cases. Under the second member, he puts what we call the places of the genus, of the definition and of the difference (1974, 55).

Aristotle had no intention of being complete; he finishes the enumeration of these places with the equivalent of an etc. One should not, therefore, be too surprised by the fact that Alexander suggests adding further places. One could formulate them thus: a word is equivocal which designates a species and one of its individuals, as well as a word that designates a genus and one of its species. To illustrate the first place, Alexander speaks of 'man' both when he designates the species and an individual man, and of 'crow' as designating the species of bird and an orator (the two in Greek, of course). From the second place, he gives as an example 'property' as designating the genus of what is predicated convertibly and the species of those predicates that do not describe the essence. He gives the example of 'justice' said of the virtues in general, and of one of the cardinal virtues, as well as of 'black' said of the color and of one of its species, namely, the board on which one writes (in Greek) (*In Top.* 114.3-22).⁶⁸

To finish up, let us note that probably Aristotle is thinking both of equivocals by change and equivocals by reason when enumerating these places, but that just as we are exercised more in the tool of difference by finding the differences between things close together, so we are exercised more in this tool by finding the distinction of the senses of a word equivocal by reason. Furthermore, these are the ones that have the most interest in philosophy. One of the examples that Aristotle gives of the first of the third group of places concerning the good:

Σκοπεῖν δὲ καὶ τὰ γένη τῶν κατὰ τοῦνομα κατηγοριῶν, εἰ ταῦτά ἐστιν ἐπὶ πάντων· εἰ γὰρ μὴ ταῦτά, δῆλον ὅτι ὁμώνυμον τὸ λεγόμενον. οἷον τὸ ἀγαθὸν ἐν ἐδέσματι μὲν τὸ ποιητικὸν ἡδονῆς, ἐν ἰατρικῇ δὲ τὸ ποιητικὸν ὑγείας, ἐπὶ δὲ ψυχῆς τὸ ποῖαν εἶναι, οἷον σώφρονα ἢ ἀνδρείαν ἢ δικαίαν· ὁμοίως δὲ καὶ ἐπὶ ἀνθρώπου. ἐνιαχοῦ δὲ τὸ ποτέ, οἷον τὸ ἐν τῷ καιρῷ ἀγαθόν· ἀγαθὸν γὰρ λέγεται τὸ ἐν τῷ καιρῷ. πολλακίς δὲ τὸ ποσόν, οἷον ἐπὶ τοῦ μετρίου· λέγεται γὰρ καὶ τὸ μέτριον ἀγαθόν. ὥστε ὁμώνυμον τὸ ἀγαθόν. (*Top.* I 15.107a3-13)⁶⁹

⁶⁸ Alexander also alludes to certain of these examples on 39.12-10.

⁶⁹ 'There is also examining the categories of predication of the word to see if these are the same in all cases. For if they are not the same, it is clear that the expression is equivocal. For instance, the good in foods is what produces pleasure, in medicine what produces health; but in the case of the soul, it is being of a certain sort (e.g. temperate, courageous, or just) and similarly in the case of a person. Sometimes, it is a time, e.g. what is opportune <is good> (for that which is opportune is called good). Often, it is a quantity, as in the case of what is proportionate (for the proportionate is also called good). Consequently, 'good' is equivocal.' Smith translation

Now, in the *Nicomachean Ethics*, the Stagirite outlines in greater detail the ways in which things may be good:

τιμῆς δὲ καὶ φρονήσεως καὶ ἡδονῆς ἕτεροι καὶ διαφέροντες οἱ λόγοι ταύτη ἢ ἀγαθά. οὐκ ἔστιν ἄρα τὸ ἀγαθὸν κοινόν τι κατὰ μίαν ἰδέαν. ἀλλὰ πῶς δὴ λέγεται; οὐ γὰρ ἔοικε τοῖς γε ἀπὸ τύχης ὁμωνύμοις. ἀλλ' ἄρα γε τῷ ἀφ' ἑνὸς εἶναι ἢ πρὸς ἓν ἅπαντα συντελεῖν, ἢ μᾶλλον κατ' ἀναλογίαν; ὡς γὰρ ἓν σῶματι ὄψις, ἓν ψυχῇ νοῦς, καὶ ἄλλο δὴ ἓν ἄλλω. (*Eth. Nic. I* 6.1096b23-29)⁷⁰

In this passage, Aristotle is seeking to know why distinct things are called 'good'. These things are not named 'good' univocally, since 'good' is not defined in the same way as attributed to one or the other. The things so named are equivocals, in the sense described in the *Categories*. But how? Aristotle then immediately excludes one possibility: it is not by chance.⁷¹ As Owens 1963, 117 remarks, in general, such equivocals receive but scant attention from the Stagirite. He usually mentions them only to exclude their consideration.

THE THIRD TOOL: THE TWO KINDS OF DIFFERENCE AND THEIR ORDER. (CHAPTER 16)

It is first of all a question of finding differences between things in the same genus:

τὰς δὲ διαφορὰς ἓν αὐτοῖς τε τοῖς γένεσι πρὸς ἄλληλα θεωρητέον, οἷον τίνι διαφέρει δικαιοσύνη ἀνδρείας καὶ

⁷⁰ 'But as a matter of fact the notions of honour and wisdom and pleasure, as being good, are different and distinct. Therefore, good is not a general term corresponding to a single Idea. But in what sense then are different things called good? For they do not seem to be a case of things that bear the same name merely by chance. Possibly things are called good in virtue of being derived from one good; or because they all contribute to one good. Or perhaps it is rather by way of a proportion: that is, as sight is good in the body, so intelligence is good in the soul, and similarly another thing in something else.' Rackham translation

⁷¹ Alexander calls the 'equivocals by chance' the primary (κυρίως) equivocals. He distinguished them from those which 'have some cause for their being named alike': ἐνταῦθα δὲ ἐπιμελεστέραν ποιούμενος τὴν διαίρεσιν διαφέρειν τε αὐτὴν φησι τῶν ὁμωνύμων, καὶ τίνι διαφέρει λέγει. οὐ γὰρ μόνον ὀνόματος κεκοινώνηκε τὰ τοιαῦτα καὶ οὕτως ἔχοντα πρὸς ἄλληλα, ὡς τὰ κυρίως ὁμώνυμα λεγόμενα, ἃ ἔστι τὰ ἀπὸ τύχης, ἀλλὰ καὶ αἰτίαν τινὰ ἔχει τοῦ ὁμοίως ἀλλήλοις ὀνομάσθαι (*In Metaph.*, 241.25-27).

φρόνησις σωφροσύνης (ταῦτα γὰρ ἅπαντα ἐκ τοῦ αὐτοῦ
γένους ἐστίν) (Top. I 16.107b39-108a1)⁷²

These differences not being evident, there is, as Alexander remarks, great risk of erring and of thinking that the things are identical.

Then it is necessary to search among things that are not too far apart:

καὶ ἐξ ἄλλου πρὸς ἄλλο τῶν μὴ πολὺ λίαν
διεστηκότων, οἷον τίνι αἴσθησις ἐπιστήμης· (Top. I 16.108a3-
4)⁷³

Alexander speaks of analogs. Explaining Aristotle's example, he says that science and sensation belong to different genera, the first being a conception or a judgment (ὑπόληψις); the other, not. Nonetheless, sensation is related to the sensibles as science to the knowables. Furthermore, both are critical faculties and exercise judgment (κρίτικα). Whence, he says, because of this likeness certain thinkers have identified them, and this is an error that one avoids by seeking out the differences, of which Alexander enumerates many (*In Top.* 116.10-16). We will come back to this error in our analysis of Book III of the *De Anima*.

Finally, between things that are very far apart, the differences are evident:

ἐπὶ μὲν γὰρ τῶν πολὺ διεστηκότων κατὰδηλοι
παντελῶς αἱ διαφοραί. (Top. I 16.108a4-6)⁷⁴

It would not occur to anyone to inquire into how a man differs from wood, Alexander notes (*In Top.* 115.21).⁷⁵

Alexander notes that Aristotle does not give places, as for the two preceding tools, to show how one must find the differences, but that he is content to indicate in what things we

⁷² 'As for differences, one should study both things within the same genera, in comparison to each other (e.g. in virtue of what does justice differ from courage, or wisdom from moderation: all of these are from the same genus)' Smith translation

⁷³ 'and things from a different genus, in comparison to something else that does not differ too very much (e.g. in virtue of what does perception differ from knowledge).' Smith translation

⁷⁴ 'For in the case of things very different, the differences are completely obvious.' Smith translation

⁷⁵ There is only a reason to seek differences between things a bit close together: 'divisio enim naturaliter posterior est compositione, nam non est divisio nisi compositorum, sicut non est corruptio nisi generatorum' (Aquinas, *In Periherm.* I 8#90).

should seek them and exercise ourselves with a view to the acquisition of a greater facility for discovering them (*In Top.* 115.15-19).⁷⁶

Furthermore, Alexander is already talking about the uses of the third tool, and he adds two to those Aristotle will be mentioning in Chapter 18 (Alexander will be repeating these too then), and that it seems to me useful to point out. The knowledge of the differences is useful, he says, with a view to divisions of the genera towards their species, for the discovery of the differences between things in the same genus consists in seizing their division into species (*In Top.* 115.4-6). It is then a question of the difference that divides, that is to say, considered in relation to the genus, such as rational versus animal. The difference of which Aristotle is speaking with a view to the definition is in fact constitutive, considered in relation to the species that it constitutes, such as rational versus man. Alexander sees clearly a *difference*, since he mentions the constitutive difference a bit further on (*In Top.* 115.13-14). Furthermore, the knowledge of the differences, Alexander also says, serves for objecting to inductive arguments, since, knowing that such a case differs from those that one is ready to subject universally to an attribute, we will be able to oppose ourselves to the person who practices an induction (*In Top.* 115.6-8).

THE FOURTH TOOL: THE TWO KINDS OF LIKENESS AND THEIR ORDER. (CHAPTER 17)

At first sight, Aristotle might seem to be proceeding in the inverse order from the chapter devoted to the third tool. For there, he started with very close things, and here he begins with things in different genera:

τὴν δὲ ὁμοιότητα σκεπτέον ἐπὶ τε τῶν ἐν ἑτέροις
γένεσιν, ὡς ἕτερον πρὸς ἕτερον τι, οὕτως ἄλλο πρὸς
ἄλλο (οἷον ὡς ἐπιστήμη πρὸς ἐπιστητόν, οὕτως
αἴσθησις πρὸς αἰσθητόν), καὶ ὡς ἕτερον ἐν ἑτέρῳ τινί,
οὕτως ἄλλο ἐν ἄλλῳ (οἷον ὡς ὄψις ἐν ὀφθαλμῷ, νοῦς

⁷⁶ De Pater suggests an explanation of Aristotle's brevity. According to him, Aristotle would be supposing that Plato's divisional method was known, the proof being that when he examines the process that leads the mind to the real differences in *Metaphysics* VII 2, it is this division that is commented on. According to De Pater, this method is at work already in the third tool; moreover, division seems to be the only method that the third tool uses. See De Pater 1965, 158-159.

ἐν ψυχῇ, καὶ ὡς γαλήνη ἐν θαλάσῃ, νηνεμία ἐν ἀέρι).
(*Top.* I 17.108a7-12)⁷⁷

Now, it is more difficult to find differences between things that are close together:

in illis in quibus est major convenientia, magis difficile est differentias invenire. (Albert, *In Top.* 286b)

Likewise, it is more difficult to examine proportions:

Similitudo quae est quantum instrumentum in his quae sunt in diversis generibus: quia in his artificiosius est eam invenire: et haec est inventio similitudinis et similitudo habitudinum in proportione. (Albert, *In Top.* 286-287)

Under this aspect of the difficulty, therefore, the order remains the same:

Sicut autem dictum est, quod praecipue est laborandum in quaerendis differentiis eorum, quae valde conveniunt inter se, sic praecipue est laborandum in inveniendis convenientiis eorum, quae valde differunt inter se. (Maurus, *In Top.* 414#2)

What is first given is what consists in the best exercises, for, as Alexander says, the exercises must be carried out in those things that are the most difficult:

μάλιστα δ' ἐν τοῖς πολὺ διεστῶσι γυμνάζεσθαι δεῖ·
ῥᾶον γὰρ ἐπὶ τῶν λοιπῶν δυνησόμεθα τὰ ὅμοια
συνορᾶν. (*Top.* I 17.108a12-14)⁷⁸

In the second place, it is a question of seeing the likenesses between things that are in the same genus:

σκεπτέον δὲ καὶ τὰ ἐν τῷ αὐτῷ γένει ὄντα, εἴ τι ἅπασιν
ὑπάρχει ταυτόν, οἷον ἀνθρώπῳ καὶ ἵππῳ καὶ κυνί· ἢ

⁷⁷ 'As for similarity, this should be examined, first, in the case of things in different genera: as the one is to the one, so the other is to the other (e.g. as knowledge is to the known, so is perception to the perceptible); and, as one thing is in one, so is another in another (e.g. as sight is in the eye, so intelligence in the soul, or as a calm is in the sea, so is a stillness in the air).' Smith translation

⁷⁸ 'We should practice above all with things that are greatly different, for we shall more readily be able to discern similar things in the remaining cases.' Smith translation. See Alexander, *In Top.* 115.30-31. See also 117.3-17.

THE PARTICULAR USES OF THE LAST THREE TOOLS (CHAPTER 18)

The use of the first tool in respect to the *prothesis* is obvious. For this reason, Aristotle does not come back to it:

Εἰπὼν περὶ ἐκάστου τῶν τεσσάρων, ἃ ὄργανα εἶπεν εἶναι τῆς εὐπορίας τῶν διαλεκτικῶν λόγων τε καὶ συλλογισμῶν, ἀκολουθῶς, τί ἕκαστον αὐτῶν συντελεῖ πρὸς αὐτοὺς καὶ κατὰ τί ὄργανα λέγεται, δείκνυσι. καὶ τὸ μὲν ἀπὸ τῆς τῶν προτάσεων ἐκλογῆς τε καὶ παρασκευῆς γινόμενον χρήσιμον πρὸς τὴν τῶν συλλογισμῶν εὐπορίαν ὡς γνώριμον παρέλιπεν εἰπεῖν. ὕλη γὰρ καὶ μέρη τῶν συλλογισμῶν αἱ προτάσεις· ἐκ γὰρ τῶν προτάσεων οἱ συλλογισμοί· καὶ δῆλον ὅτι ἡ τούτων εὐπορία τε καὶ παρασκευὴ εὐπορίαν ἡμῖν συλλογισμῶν παρέξει. πρὸς δὲ τί χρήσιμον τῶν ἄλλων ἕκαστον, λέγει. (Alexander, *In Top.* 119.3-10)⁸⁰

Tangendo horum instrumentorum utilitates, non oportet exponere primi: quia haec per immediatam ordinationem ut principium ordinatur ad syllogismum, et in syllogismo patet utilitas ejus. (Albert, *In Top.* 287)⁸¹

THE FOUR USES OF THE SECOND TOOL AND THEIR ORDER

Aristotle distinguishes two pairs of reasons why the second tool is useful in particular.⁸² He says first of all that:

Χρήσιμον δὲ τὸ μὲν ποσαχῶς λέγεται ἐπεσκέφθαι πρὸς τε τὸ σαφές (μᾶλλον γὰρ ἂν τις εἰδείη τί τίθησιν, ἐμφανισθέντος ποσαχῶς λέγεται) καὶ πρὸς τὸ γίνεσθαι κατ' αὐτὸ τὸ πρᾶγμα καὶ μὴ πρὸς τὸ ὄνομα τοὺς συλλογισμούς· ἀδήλου γὰρ ὄντος ποσαχῶς λέγεται, ἐνδέχεται μὴ ἐπὶ ταῦτόν τόν τε ἀποκρινόμενον καὶ τὸν

⁸⁰ See also 88.16-19.

⁸¹ See also Pacius, *In Top.* 365 and Maurus, *In Top.* 414.

⁸² Albert enumerates the four uses, but divides this into three: "Sunt ergo tres dictae utilitates secundi instrumenti: quia distinctio multiplicis, aut utilis est propter propositum in se acceptum, et sic est utilitas prima: aut utilis propter propositum ad aliud comparatum: et tunc aut est comparatum ad disputationem, et sic est utilitas secunda: aut comparatur ad condisputantem, et sic est utilitas tertia." Albert, p. 76b-77a. In fact, he takes the two last as one. Maurus does the same thing. Pacius explains and announces four. Frappier quite simply omits the fourth.

ἔρωτῶντα φέρειν τὴν διάνοιαν· ἐμφανισθέντος δὲ ποσαχῶς λέγεται καὶ ἐπὶ τί φέρων τίθησι, γελοῖος ἂν φαίνοιτο ὁ ἐρωτῶν, εἰ μὴ πρὸς τοῦτο τὸν λόγον ποιοῖτο. (*Top.* I 18.108a18-26)⁸³

Since most words used by the questioner have more than one meaning or sense, the second tool is necessary in order (1) to make clear what is being asked and answered and laid down,⁸⁴ and (2) so that the one who asks and the one who answers will be talking about the same thing and not just using the same word with other things in mind.

Aristotle continues:

χρήσιμον δὲ καὶ πρὸς τὸ μὴ παραλογισθῆναι καὶ πρὸς τὸ παραλογίσασθαι. εἰδότες γὰρ ποσαχῶς λέγεται οὐ μὴ παραλογισθῶμεν, ἀλλ' εἰδήσομεν ἔαν μὴ πρὸς τὸ αὐτὸ τὸν λόγον ποιῆται ὁ ἐρωτῶν· αὐτοῖ τε ἐρωτῶντες δυνησόμεθα παραλογίσασθαι, ἔαν μὴ τυγχάνη εἰδῶς ὁ ἀποκρινόμενος ποσαχῶς λέγεται. (*Top.* I 18.108a26-31)⁸⁵

Thus, the second tool is also useful (1) to avoid the mistake of equivocation that Aristotle says is one of the most common (*Soph. el.* 1.165a3-6),⁸⁶ (and likely other mistakes in words), when answering. And (2) when questioning with interlocutors who are ill-disposed (or to see

⁸³ 'It is useful to have examined in how many ways a word is said both for the sake of clarity (for someone would better know what it is he is conceding once it had been brought to light in how many ways <the term> is applied and in order to make our deductions concern the thing itself rather than being about a word. For when it is unclear in how many ways something is said, it is possible that the answerer and the questioner are not thinking about the same thing; but once it has been brought to light in how many ways it is applied and which <of these> <the answerer> is thinking about in conceding <the premiss>, the questioner would appear ridiculous if he did not make his argument about this.' Smith translation

⁸⁴ For a particularly nice example of this use of this tool, because Aristotle himself mentions the utility of it: see *Cael.* I 9.278b9-11: εἰπῶμεν δὲ πρῶτον τί λέγομεν εἶναι τὸν οὐρανὸν καὶ ποσαχῶς, ἵνα μᾶλλον ἡμῖν δῆλον γένηται τὸ ζητούμενον.

⁸⁵ 'It can also be used both for resisting fallacies and for producing fallacies. For if we know in how many ways something is said, we shall not be taken in by fallacies ourselves but instead will know if the questioner fails to make the argument about the same thing. And when we are ourselves questioning, we will be able to argue fallaciously, if the answerer should happen not to know in how many ways something is said.' Smith translation

⁸⁶ We find this concern with avoiding verbal battles in Plato. See *Resp.* V 454a. See Le Blond 1939, 38-39: 'Cette distinction des sens (...) conduit aussi à déceler l'ambiguïté d'un terme unique: la source de la plupart des erreurs, Aristote le répète souvent au cours de son oeuvre, est que l'on ne distingue pas et donc que l'on confond. Le seul moyen d'être clair et de quitter les querelles de mots pour en venir aux choses, c'est de distinguer les sens: sans cela attaquant et défendant risquent de polémiquer chacun sur un terrain différent.' See also Thionville 1965, 50.

if they are or not), to reason equivocally taking advantage of the fact that the answerer is unable to distinguish. Pacius expresses concisely but very well what this is all about:

Secundi instrumenti, quod est multiplicium distinctio, quatuor utilitates declarat. Prima est, quod inde facilius intelligitur, quid sit id de quo disputatur. Secunda utilitas est: quia per hanc distinctionem sit, ut disseratur de rebus, non de vocabulis. Etenim si verbum multiplex in alio sensu accipiatur ab opponente, in alio a respondente: nulla erit inter eos de re controuersia, sed tantum de nomine. Tertia utilitas est, ne captiosis argumentationibus fallamur, quas per distinctionem solvere possumus. Quarta est, ut paralogismis seu captiosis possimus, si necessitas nos urgeat, alios, qui distinguendi artem ignorant, fallere. (*In Top.* 365#1-3)

As both Pacius and Maurus note, Aristotle furnishes two details about the fourth use. The paralogism due to equivocation is not possible each time that an ambiguous term is used, but only when the proposition in which it figures is true in one of its senses and false in another.⁸⁷ And this way of discussing is not the dialectician's own way, but more the sophist's way.⁸⁸ Thus, in dialectic, this is only appropriate when examining another.

The order of these reasons seems to be according to the second sense of *before* in the *Categories*.⁸⁹ The lack of clarity of the object of a discussion and the fact that the interlocutors are not talking about the same subject are not fallacies and can exist without the fallacy from equivocation. But the latter does not seem possible without the two former ones. Indeed, it is when it is not clear what is being asked for and what is assented to or denied that the questioner and answerer may be talking about different things with the same name and then committing a fallacy from mixing up two senses of a word. Hence, these reasons seem to proceed from the lesser to the greater evils they exclude. For the questioner and answerer not to be clear about what they are talking does not seem to be as bad as for them to be talking about different things and this is not so bad as to indulge in a fallacy, such as that of equivocation.

⁸⁷ τοῦτο δ' οὐκ ἐπὶ πάντων δυνατόν, ἀλλ' ὅταν ἢ τῶν πολλαχῶς λεγομένων τὰ μὲν ἀληθῆ τὰ δὲ ψευδῆ (*Top.* I 18.108a31-33).

⁸⁸ ἔστι δὲ οὐκ οἰκείος ὁ τρόπος οὗτος τῆς διαλεκτικῆς· διὸ παντελῶς εὐλαβητέον τοῖς διαλεκτικοῖς τὸ τοιοῦτον, τὸ πρὸς τοῦνομα διαλέγεσθαι, εἴαν μὴ τις ἄλλως ἐξαδυνατῆ περὶ τοῦ προκειμένου διαλέγεσθαι (*Top.* I 18.108a33-37).

⁸⁹ See Chapter 12.

In short, the second tool shows us homonymy, which, when not detected, makes the discussion obscure and could cause the answerer to agree to many propositions, of which one is not probable, all the while thinking that he is only agreeing to one, which is probable. For example, whoever agrees, without asking for any distinction, that 'the dog barks' while thinking of the animal also agrees that 'a star barks'. If he then agrees that 'the dog is in the sky' thinking of the star, the interrogator can conclude that 'things in the sky bark'. But as the answerer has given the appearance of agreeing to one single proposition, there is also only an apparent refutation:

εἰ δὲ τὰ δύο ἐρωτήματα μὴ ἓν ποιεῖ τις ἐρώτημα, οὐδ' ἂν ὁ παρὰ τὴν ὁμωνυμίαν καὶ τὴν ἀμβολογίαν ἐγένετο παραλογισμός, ἀλλ' ἢ ἔλεγχος ἢ οὐ. (*Soph. el.* 17.175b39-41)⁹⁰

This passage from Chapter 17 of the *Sophistical Refutations* shows how the cause of the fallacy of equivocation to be found in the incapacity to distinguish the meanings of terms⁹¹ is only in fact in some way a remote cause.

τί γὰρ διαφέρει ἐρωτῆσαι εἰ καλλίας καὶ θεμιστοκλῆς μουσικοὶ εἰσιν ἢ εἰ ἀμφοτέροις ἓν ὄνομα ἢν ἑτέροις οὖσιν; εἰ γὰρ πλείω δηλοῖ ἑνός, πλείω ἠρώτησεν. (*Soph. el.* 17.175b41-176a3)⁹²

More immediately, it is being pushed to accept many propositions by one's incapacity to distinguish the meanings that causes the fallacy. It is indeed incorrect to agree to many propositions in response to a single question:

τὸ δὲ ἓν κατὰ πολλῶν ἢ πολλὰ καθ' ἑνός καταφάναι ἢ ἀποφάναι, εἴαν μὴ ἓν τι ἢ τὸ ἐκ τῶν πολλῶν συγκεῖμενον, οὐκ ἔστι κατάφασσις μία οὐδὲ ἀπόφασσις.

90 'If one does not make two questions into one, the fallacy which depends on equivocation and ambiguity would not exist either, but either refutation or absence of refutation.' Forster translation. See Maurus, *In Soph. el.* 609#6: 'Si enim quis fecerit plures interrogationes et non unam, non fit paralogismus, qui videatur redarguere propter aequivocationem et amphibologiam, sed vel fit verus elenchus, vel nullo pacto fit elenchus, neque verus neque apparent; ergo signum est, quod elenchus apparens fit, quia fiunt plures interrogationes ut una; sed ad plures interrogationes factas per diversa nomina non debet dari una responsio; ergo neque ad plures interrogationes factas per unum nomen debet dari una responsio; sed interrogatio per nomen aequivocum est multiplex.'

91 See *SE*, 7, 169a22-24.

92 'For what is the difference between asking whether Callias and Themistocles are musical and asking the same question about two people both with the same name? For if one indicates more things than one, one has asked more questions than one.' Forster translation

λέγω δὲ ἐν οὐκ ἔαν ὄνομα ἔν ἧ κείμενον, μὴ ἧ δὲ ἐν τι ἐξ ἐκείνων, οἷον ὁ ἄνθρωπος ἴσως ἐστὶ καὶ ζῶον καὶ δίπουν καὶ ἡμερον, ἀλλὰ καὶ ἐν τι γίγνεται ἐκ τούτων· ἐκ δὲ τοῦ λευκοῦ καὶ τοῦ ἀνθρώπου καὶ τοῦ βαδίζειν οὐχ ἔν. ὥστε οὐτ' ἔαν ἐν τι κατὰ τούτων καταφήση τις μία κατάφασις, ἀλλὰ φωνὴ μὲν μία καταφάσεις δὲ πολλάι, οὐτ' ἔαν καθ' ἐνὸς ταῦτα, ἀλλ' ὁμοίως πολλάι. εἰ οὖν ἡ ἐρώτησις ἡ διαλεκτικὴ ἀποκρίσεώς ἐστὶν αἵτησις, ἢ τῆς προτάσεως ἢ θατέρου μορίου τῆς ἀντιφάσεως, ἢ δὲ πρότασις ἀντιφάσεως μίας μῶριον, οὐκ ἂν εἴη ἀπόκρισις μία πρὸς ταῦτα· οὐδὲ γὰρ ἡ ἐρώτησις, μία, οὐδ' ἔαν ἡ ἀληθής. εἴρηται δὲ ἐν τοῖς Τοπικοῖς περὶ αὐτῶν. (*Int.* 11.20b12-26)⁹³

It is, therefore, incorrect to give a single answer to an equivocal question:

εἰ οὖν μὴ δεῖ πρὸς δύο ἐρωτήσεις μίαν ἀπόκρισιν διδόναι, φανερόν ὅτι οὐδ' ἐπὶ τῶν ὁμωνύμων τὸ ναί ἢ οὐ λεκτέον. οὐδὲ γὰρ ὁ εἰπὼν ἀποκέκριται ἀλλ' εἴρηκεν. ἀλλ' ἀξιούταί πως ἐν τοῖς διαλεγόμενοις διὰ τὸ λανθάνειν τὸ συμβαῖνον. (*Soph. el.* 17.176a14-18)⁹⁴

This explains a bit how the third utility of the second tool depends immediately on the second. Now, one finds in *Topics* V 2, a confirmation of the fact that the second utility is tied to the first: when the question is not clear, one does not know whether one is understanding the word in the same sense as one's interlocutor:

⁹³ 'A proposition is not one but several that predicates one thing of many or many of one and the same in a positive or negative manner, unless what the many denote, in reality, is only one thing. I am not using 'one' of such things as do not, although having one name, coalesce into one total unity. Man is animal, biped, domesticated: these coalesce into one, whereas 'white,' 'man' and 'walking' do not. Should we predicate these of one subject or affirm a single predicate of them, the resulting proposition would be single in no sense except the linguistic. If, then, the dialectical question consists in requesting an answer—the granting, that is, of a premiss or of one out of two contradictories (such as each premiss itself is)—the answer to any such question as contains the aforementioned predicates cannot be one proposition. Though the answer sought for may be true, yet the question is not one but several. But this I explained in my *Topics*.' Cooke translation. If, as Cooke 1938, 150 and Tricot 1984 116n2 affirm, the only reference to the *Topics* itself that Aristotle sends his readers to here is VIII.7; if besides, as Tricot says again, Aristotle is also referring here to at least three passages from the *Sophistical Refutations* (6.169a5-20; 17.175b39; 30.181a36-10, to which Brunschwig 1967 adds a fourth; see xix, n2); here we have a case where Aristotle is speaking about the *Sophistical Refutations* under the name of the *Topics*. This is, in fact, what Brunschwig says.

⁹⁴ 'If, therefore, one must not give one answer to two questions, it is obvious that neither should one say 'yes' or 'no' where equivocal terms are used; for then the speaker has not given an answer but made a statement, but it is regarded in a way as an answer amongst those who argue, because they do not realize what is the result.' Forster translation

διὰ τοῦτο δ' οὐ χρηστέον ἐστὶν οὔτ' ὀνόματι πλεοναχῶς λεγομένῳ οὔτε λόγῳ τῷ τὸ ἴδιον σημαίνοντι, διότι τὸ πλεοναχῶς λεγόμενον ἀσαφὲς ποιεῖ τὸ ῥηθέν, ἀποροῦντος τοῦ μέλλοντος ἐπιχειρεῖν πότερον λέγει τῶν πλεοναχῶς λεγομένων. (*Top.* V 2.129b35-130a4)⁹⁵

In *Top.* VIII, 7, one finds a confirmation of the dependence of the third utility on the two first: when the question is equivocal and is, therefore, not clear, the answerer runs the risk of taking the proposition in the sense in which it is probable, whereas the questioner is taking it in the sense in which it is false, but in which, given the other premise agreed to, the form will be valid and then the answerer runs the risk of committing a fallacy of equivocation:

Ὁμοίως δὲ καὶ ἐπὶ τῶν ἀσαφῶς καὶ πλεοναχῶς λεγομένων ἀπαντητέον. ἐπεὶ γὰρ δέδοται τῷ ἀποκρινομένῳ μὴ μανθάνοντι εἰπεῖν ὅτι οὐ μανθάνω, καὶ πλεοναχῶς λεγομένου μὴ ἐξ ἀνάγκης ὁμολογήσαι ἢ ἀρνήσασθαι, δῆλον ὡς πρῶτον μὲν, ἂν μὴ σαφὲς ἢ τὸ ῥηθέν, οὐκ ἀποκνητέον τὸ φάναι μὴ συνιέναι· πολλάκις γὰρ ἐκ τοῦ μὴ σαφῶς ἐρωτηθέντος διδόναι ἀπαντᾶ τι δυσχερές. ἂν δὲ γνώριμον μὲν ἢ πλεοναχῶς δὲ λεγόμενον, ἐὰν μὲν ἐπὶ πάντων ἀληθὲς ἢ ψεῦδος ἢ τὸ λεγόμενον, δοτέον ἀπλῶς ἢ ἀρνητέον, ἐὰν δ' ἐπὶ τὶ μὲν ψεῦδος ἢ ἐπὶ τὶ δὴ ἀληθές, ἐπισημαντέον ὅτι πλεοναχῶς λέγεται καὶ διότι τὸ μὲν ψεῦδος τὸ δ' ἀληθές: ὕστερον γὰρ διαιρουμένου ἄδηλον εἰ καὶ ἐν ἀρχῇ συνεώρα τὸ ἀμφίβολον. (...) πλειόνων γὰρ ὄντων τῶν ὑπὸ ταύτῳ ὀνόματι ἢ λόγον ῥαδίᾳ ἢ ἀμφισβήτησις. ἐὰν δὲ καὶ σαφὲς ἢ καὶ ἀπλοῦν τὸ ἐρωτώμενον, ἢ 'ναί' ἢ 'οὐ' ἀποκριτέον. (*Top.* VIII 7.160a18-34)⁹⁶

⁹⁵ 'Therefore, one must not use as signifying property either a word or an expression which is used with several meanings, because anything which has several meanings renders the statement obscure, since he who is about to argue is doubtful which of the various meanings his opponent is using' Forster translation

⁹⁶ 'The situation must be met in a similar way when terms are used obscurely and have more than one meaning. For, since the answerer is always allowed, if he does not understand, to say, "I don't understand," and, if the question has more than one meaning, he need not necessarily assent or deny, it is obvious, in the first place, that, if what is said is not clear, he must not shrink from saying that he does not comprehend; for a difficulty often confronts people if they assent when questions have not been clearly put to them. When the question is intelligible but can bear more than one meaning, then, supposing what it says is true or false in every case, he must assent or deny absolutely, but, if it is partly true and partly false, he must add the remark that it has several meanings and that in one meaning it is false, in the other true; for, if he makes this distinction only at a later stage, it is not clear whether originally he noticed the ambiguity (...) when several things fall under the same term or expression, disagreement easily arises. If, on the other hand, the question asked is plain and simple, the answer must be "yes" or "no".' Forster translation

THE TWO USES OF THE THIRD TOOL AND THEIR ORDER

Aristotle states that the third tool is useful for (1) syllogisms about the same and other, and (2) knowing what each thing is or for definitions:

Τὸ δὲ τὰς διαφορὰς εὔρειν χρήσιμον πρὸς τε τοὺς συλλογισμοὺς τοὺς περὶ ταύτου καὶ ἑτέρου καὶ πρὸς τὸ γνωρίζειν τί ἕκαστόν ἐστίν. (*Top.* I 18.108a38-108b1)⁹⁷

According to Albert, the first use is that of discovering dividing differences; the second, of discovering constitutive differences:

Differentias autem invenire (quod est instrumentum tertium) est utile et praecipue ad syllogismos de eodem et de diverso construendos: et hoc est utilitas differentiae in quantum differentia est et divisiva. Et secundo est utile ad cognoscendum per diffinitionem unumquodque: quia per differentiarum divisionem venamur diffinitionem: et scientes ultimam differentiam constitutivam cum genere, scimus quod est species diffinita. (*In Top.* 288)

Seeing the difference between two things enables one to syllogize right away that they are other and not the same.⁹⁸ This usefulness is more immediately seen than the second, is presupposed to the second (for one cannot define things without seeing their differences)⁹⁹ and is more sufficient than the second (since difference is only a part of a definition). That the usefulness of this tool for syllogisms about the same and the other is more known to us, presupposed to the second use, and that the tool is more sufficient for achieving it would contribute to explaining why Aristotle gives it first. The first use is also closer to a syllogism, which is the purpose of the treatise.

When reading the *Topics* and the *Sophistical Refutations*, it becomes clear that one means for someone to avoid certain fallacies would be to perfect his mastery of the tools (although one must perhaps master them particularly well, as does the wise man, in order to avoid all, or almost all, fallacies). As we have seen, this is particularly clear in the case of the fallacy of equivocation, the most common fallacy.

⁹⁷ 'Finding differences is useful both for syllogisms about what is the same or different and for recognizing what any particular thing is.' Smith translation modified.

⁹⁸ ὅτι μὲν οὖν πρὸς τοὺς συλλογισμοὺς τοὺς περὶ ταύτου καὶ ἑτέρου χρήσιμον, δῆλον (εὐρόντες γὰρ διαφορὰν τῶν προκειμένων ὁποιοῦν δεδειχότες ἐσόμεθα ὅτι οὐ ταυτόν) (*Top.* I 18.108b1-4).

⁹⁹ πρὸς δὲ τὸ γνωρίζειν τί ἐστίν, διότι τὸν ἴδιον τῆς οὐσίας ἑκάστου λόγον ταῖς περὶ ἕκαστον οἰκείαις διαφοραῖς χωρίζειν εἰώθαμεν (*Top.* I 18.108b4-6).

He [Aristotle] recognizes that sophistical fallacies (and more serious philosophical errors) often turn on the equivocal use of a term, and a thorough understanding of uses is a crucial instrument for defense against these. (Smith 1995, 53)

Aristotle mentions in fact in the *Topics* that to avoid equivocation is one of the particular uses of the second tool, and, in the *Sophistical Refutations*, he often says that the fallacy of equivocation is the object of an ability to distinguish the meanings of words.¹⁰⁰ But would it not be permissible to see a tie also between the third tool and the fallacies of the accident and of the absolute? For, just as it is difficult to see the difference between things that are close together, so it is difficult to distinguish between the per se and the per accidens (so much so that Aristotle says that this deceives even the wise), and the simply so and in some respect. Such that one runs the risk of confusing them, thus committing a fallacy of the accident or of the absolute.

Ἡ δ' ἀπάτη γίνεται (...) τῶν δὲ παρὰ τὸ συμβεβηκὸς, διὰ τὸ μὴ δύνασθαι διακρίνειν τὸ ταῦτόν καὶ τὸ ἕτερον (...) τῶν δὲ παρὰ τὴν ἔλλειψιν τοῦ λόγου καὶ τῶν παρὰ τὸ πῆ καὶ ἀπλῶς ἐν τῷ παρὰ μικρὸν ἢ ἀπάτη· ὡς γὰρ οὐδὲν προσσημαῖνον τὸ τί ἢ πῆ ἢ τὸ πῶς ἢ τὸ νῦν καθόλου συγχωροῦμεν. (*Soph. el.* 7.169a22; b3-4; 9-12)¹⁰¹

Now, does the third dialectical tool extend as far as seeing the difference between the per se and the per accidens, as well as between what is so simply and what is so in some respect? Since, as we will explain, a tool in dialectic is an ability, and an ability is defined by how far it extends, we need to ask these questions. Now, since Aristotle does not say that the third tool is

¹⁰⁰ The existence of numerous connections between the two treatises is admitted by everyone and poses no problem. In addition to the signs already given in Chapter 1 of this 'neighborliness' (see *Soph. el.* 34.183b2) and which are more evident, it is perhaps worth the effort to point out that the two treatises present places and assign refutation as their goal (this is something already in the title of the *Sophistical Refutations* and, in the *Topics*, Aristotle affirms that the dialectician must refute, and do so especially negatively (*Top.* II 1. 109a6-10). Moreover, dialectical syllogisms and sophistical ones have the same remote matter. The answer one would bring to a question concerning the link between the dialectical tools and the fallacies such as 'doesn't everyone depend on a bad use of these?' would certainly have important consequences for the conception one has of the tie between the two treatises. But too much reflection would be necessary in order to confirm or infirm this hypothesis here. I will limit myself to supporting it by a few observations.

¹⁰¹ 'In fallacies connected with accident the deception is due to inability to distinguish the identical and the different (...) In fallacies connected with the defect in the definition of refutation and with the distinction between a qualified and an absolute statement the deception is due to the minuteness of the difference; for we regard the qualification of a particular case or respect or manner or time as having no extra significance and concede the universality of the proposition.' Forster translation

useful for avoiding the mistakes from mixing up the per se and per accidens and from mixing up what is so simply with what is so in some way, we shall not affirm so either.

But if perhaps the third dialectical tool does not include the ability to distinguish between the per se and the per accidens and the ability to distinguish between what is so simply and what is so in some way, it is undeniably akin to these abilities and disposes for them. How could dialectic be said to have, πρὸς τὰς ἀπασῶν τῶν μεθόδων ἀρχὰς ὁδὸν if it did not, at least, prepare us for these distinctions? It may be the case nonetheless that to see such distinctions fully is already to have arrived at the beginnings of scientific knowledge. Whence, if the third dialectical tool is perhaps not sufficient to avoid these errors, it certainly helps.

Likewise, there also seems to be a tie between the third tool and the ignorance of refutation, as well as between it and the petition of principle, the false cause and the putting-together of many questions in one:

ὁμοίως δὲ καὶ ἐπὶ τῶν τὸ ἐν ἀρχῇ λαμβανόντων¹⁰² καὶ τῶν ἀναιτίων καὶ ὅσαι τὰ πλείω ἐρωτήματα ὡς ἐν ποιοῦσιν· ἐν ἅπασι γὰρ ἡ ἀπάτη διὰ τὸ παρὰ μικρόν· οὐ γὰρ διακριβοῦμεν οὔτε τῆς προτάσεως οὔτε τοῦ συλλογισμοῦ τὸν ὅρον διὰ τὴν εἰρημένην αἰτίαν. (*Soph. el.* 7.169b12-17)¹⁰³

Moreover, Aristotle says that to study fallacies helps one to better see likenesses and differences between things (ἄμεινον ἔχειν ποιοῦσι πρὸς τὸ (...) ποῖα ὁμοίως καὶ ποῖα ἑτέρως ἐπὶ τε τῶν πραγμάτων συμβαίνει (*Soph. el.* 16.175a5-9). If it is true that knowledge improves an ability because it bears on the object of that ability, its act or the ability itself, it seems therefore that Aristotle is letting it be understood that fallacies are one of the objects of the third and fourth tools.

¹⁰² See also *RS*, 5, 167a36-39: Οἱ δὲ παρὰ τὸ τὸ ἐν ἀρχῇ λαμβάνειν γίνονται μὲν οὕτως καὶ τοσαυταχῶς ὅσαχῶς ἐνδέχεται τὸ ἐξ ἀρχῆς αἰτεῖσθαι, φαίνονται δ' ἐλέγχειν διὰ τὸ μὴ δύνασθαι συνορᾶν τὸ ταῦτόν καὶ τὸ ἕτερον.

¹⁰³ 'So, too, when people assume the original point and when the wrong cause is assigned and when several questions are united in one; for in all these cases the deception is due to the minuteness of the difference; for we fail accurately to carry out the definition of "proposition" and "reasoning" from the above-mentioned cause.' Forster translation

THE THREE USES OF THE FOURTH TOOL AND THEIR ORDER

In the last part of Chapter 18, Aristotle points out that the fourth tool, the ability to look at likeness, is useful for three things: (1) inductions, (2) hypothetical syllogisms and (3) definitions.¹⁰⁴

The order here is similar to that in the uses of the third tool where the usefulness for argument is put before the usefulness for definition. Although only syllogism is used in the *πρόθεσις* as being the more perfect argument, nevertheless, in Chapter 12, devoted to the kinds of argument used by the dialectician, Aristotle points out that the dialectician uses both induction and syllogism. Induction is placed before hypothetical syllogism because likeness is more known and apt to be the basis of induction than of syllogism. All inductions are based on likeness while some syllogisms are not (such as those based on the tool of difference). Both kinds of likeness (proportional and in the same genus) can be used for induction, but perhaps only the proportional likeness is useful for the hypothetical or if-then syllogism.

The usefulness of likeness for induction is easy to see.¹⁰⁵ The usefulness of likeness for hypothetical syllogisms is seen in the formation of the if-then or hypothetical statement. The if-then statement is often based on the likeness of ratios. For example, if one looks at the likeness that, as seeing is to the eye so is the act of reason to man, then one can form an if-then statement that if seeing is the purpose of the eye, then the act of reason is the purpose of man. And then one reasons from the (more) known ratio to the unknown (or less known ratio). In the example, since one knows already that seeing is the purpose of the eye, (this is the statement agreed to from which one reasons, according to Alexander),¹⁰⁶ one can then

¹⁰⁴ Ἡ δὲ τοῦ ὁμοίου θεωρία χρήσιμος πρὸς τε τοὺς ἐπακτικούς λόγους καὶ πρὸς τοὺς ἐξ ὑποθέσεως συλλογισμοὺς καὶ πρὸς τὴν ἀπόδοσιν τῶν ὀρισμῶν (*Top.* I 18.108b7-9).

¹⁰⁵ πρὸς μὲν οὖν τοὺς ἐπακτικούς λόγους, διότι τῇ καθ' ἕκαστα ἐπὶ τῶν ὁμοίων ἐπαγωγῇ τὸ καθόλου ἀξιούμεν ἐπάγειν· οὐ γὰρ ῥάδιόν ἐστιν ἐπάγειν μὴ εἰδότας τὰ ὅμοια (*Top.* I 18.108b9-12). See Alexander, *In Top.* 122.18-19: πρὸς μὲν τοὺς ἐπακτικούς λόγους, ὅτι διὰ τῆς τῶν κατὰ μέρος ὁμοιότητος τὸ καθόλου πιστὸν ἐν ταῖς ἐπαγωγαῖς δείκνυται γίνεσθαι.

¹⁰⁶ By the expression 'starting with an agreement' he designates what Aristotle names 'hypothetical syllogism': ὁ γὰρ ἐξ ὑποθέσεως συλλογισμὸς νῦν λεγόμενος ἐξ ὁμολογίας ἐστίν (*Alexander, In Top.* 122.29-30).

syllogize that the act of reason is the purpose of man.¹⁰⁷ Thus, Alexander explains, one supposes that what is confirmed in one case will also be so for the others that are like it. The one sets about confirming it for the first case:

ὑποθέμενοι γάρ, ὡς ἂν ἐπὶ τοῦδέ τινος δειχθῆ, οὕτως
καὶ ἐπὶ τῶν ἄλλων τῶν ὁμοίων αὐτῷ ἔσεσθαι
δεδειγμένον, ἐπὶ τοῦδέ τινος τὴν δεῖξιν ποιοῦμεθα.
(Alexander, *In Top.* 123.30-124)¹⁰⁸

Aristotle points out how both kinds of likeness can be useful for the genus of a definition. The resemblances between things in remote genera serve for defining the very common things, such as rest, and the principle, of which we have already spoken.¹⁰⁹

Neque solum consideratio similitum est utilis ad inveniendas definitiones eorum, quae sunt in eodem genere, sed etiam ad inveniendas definitiones

¹⁰⁷ πρὸς δὲ τοὺς ἐξ ὑποθέσεως συλλογισμούς, διότι ἔνδοξόν ἐστιν, ὡς ποτε ἐφ' ἐνὸς τῶν ὁμοίων ἔχει, οὕτως καὶ ἐπὶ τῶν λοιπῶν. ὥστε πρὸς ὃ τι ἂν αὐτῶν εὐπορῶμεν διαλέγεσθαι, προδιομολογησόμεθα, ὡς ποτε ἐπὶ τούτων ἔχει, οὕτω καὶ ἐπὶ τοῦ προκειμένου ἔχειν, δείξαντες δὲ ἐκεῖνο καὶ τὸ προκειμένον ἐξ ὑποθέσεως δεδειχότες ἐσομεθα· ὑποθέμενοι γάρ, ὡς ποτε ἐπὶ τούτων ἔχει, οὕτω καὶ ἐπὶ τοῦ προκειμένου ἔχειν, τὴν ἀπόδειξιν πεποιήμεθα (*Top.* I 18.108b12-19).

¹⁰⁸ Alexander gives another example. Since the kinds of opposites are alike, he says, we judge that what applied to one of them applies also to the rest. Showing in respect to contraries that it is impossible that they should belong simultaneously to the same thing, he therefore concludes that this is also true of the other opposites. And he does so in fact, because of this concession that what applies to one of the opposites applies to the others, something that was conceded because of the likeness they have between them: καὶ δείξαντες ἐπὶ τῶν ἐναντίων φέρε εἰπεῖν, ὅτι ἀδύνατόν ἐστιν αὐτὰ ἅμα τῷ αὐτῷ ὑπάρχειν, (...) ἡγοῦμεθα καὶ ἐπὶ τῶν ἀλλήλων ἀντικειμένων τὸ αὐτὸ δεδειχθαι διὰ τὴν ὁμολογίαν τὴν προγενομένην ὅτι, ὃ ἐφ' ἐνὸς τῶν ἀντικειμένων, καὶ ἐπὶ τῶν ἄλλων· ὃ οὐδεὶς ἂν συνεχώρησεν εἰ μὴ διὰ τὴν ὁμοιότητα αὐτῶν τὴν πρὸς ἄλληλα (124.3-8). See also Maurus, 415#5: 'Quod fit utilis ad syllogismum ex suppositione, probatur; nam syllogismus ex suppositione fit, supponendo probabile esse, quod sicut se habet in uno similitum, sic se habet in aliis; ergo eo ipso, quod probaverimus, quod in uno sic se habet, et quod hoc est simile illi, concludemus, quod etiam in alio sic se habet; sed ad hoc utilis est consideratio similitum; ergo consideratio similitum utilis est ad argumentum ex suppositione.'

¹⁰⁹ ὁμοίως δὲ καὶ ἐν τοῖς πολὺ διεστῶσι χρήσιμος πρὸς τοὺς ὀρισμούς ἢ τοῦ ὁμοίου θεωρία, οἷον ὅτι ταῦτὸν γαλήνη μὲν ἐν θαλάσση, νηνεμία δ' ἐν ἀέρι (ἐκάτερον γὰρ ἤσυχία), καὶ στιγμή ἐν γραμμῇ καὶ μονὰς ἐν ἀριθμῷ (ἐκάτερον γὰρ ἀρχή). ὥστε τὸ κοινὸν ἐπὶ πάντων γένος ἀποδιδόντες δόξομεν οὐκ ἄλλοτρίως ὀρίζεσθαι. σχεδὸν δὲ καὶ οἱ ὀριζόμενοι οὕτως εἰώθασιν ἀποδιδόναι· τὴν τε γὰρ μονάδα ἀρχὴν ἀριθμοῦ φασιν εἶναι καὶ τὴν στιγμήν ἀρχὴν γραμμῆς. δῆλον οὖν ὅτι εἰς τὸ κοινὸν ἀμφοτέρων γένος τιθέασιν (*Top.* I 18.108b23-31).

eorum, quae sunt in diversis generibus et plurimum differunt; ex. gr. inveniunt, quod tranquillitas et serenitas conveniunt in hoc, quod sint quies, habemus genus non extraneum ad ipsa definienda; et inveniunt, quod unitas et punctum conveniunt in hoc, quod sunt principium, habemus aliquod genus ad ipsa definienda; siquidem tranquillitas definiri solet quies in mari; serenitas quies in aere; unitas definiri solet principium numeri; punctum principium lineae. (Maurus, *In Top.* 425#6)

The resemblances between things in the same genus serve for finding the definition of this genus.¹¹⁰

The second use of the third tool and the third use of the fourth tool together are useful to find the whole definition since the latter tool gives the genus and the former, the differences.¹¹¹ Likewise, the first use of the third tool is for negative conclusions and the second use of the fourth tool seems to be for affirmative conclusions most of the time. Every conclusion is either affirmative or negative. Thus, there is a certain completeness in the combination of the third and fourth tools in regard to definition, but also in regard to syllogism, while the fourth tool is enough for induction.

¹¹⁰ πρὸς δὲ τὴν τῶν ὀρισμῶν ἀπόδοσιν, διότι δυνάμενοι συνορᾶν τί ἐν ἐκάστῳ ταῦτόν οὐκ ἀπορήσομεν εἰς τί δεῖ γένος ὀριζομένου τὸ προκείμενον τιθέσθαι· τῶν γὰρ κοινῶν τὸ μάλιστα ἐν τῷ τί ἐστὶ κατηγορούμενον γένος ἂν εἴη (*Top.* I 18.108b19-23).

¹¹¹ An examination of the two ways Aristotle gives of arriving at definition in the *Posterior Analytics* II 13 would show clearly how they depend upon the ability to find differences and the ability to look at likeness. How could one arrive at a definition by dividing a genus if one could not find differences? How could one arrive at a definition by examining many examples of the same thing if one could not consider how they are alike?

CHAPTER SIX

THE NATURE OF THE DIALECTICAL TOOLS

THE GENUS OF THE DIALECTICAL TOOL

The time has now come to try to define the dialectical tool. It would seem to be either an act or an ability, but which?¹ When Aristotle first names or lists the four, he seems to be speaking of acts, although, for the second tool, he uses the word δύνασθαι, indicating an ability. As De Pater puts it:

Les infinitifs qui figurent dans Top. I, 13 (λαβεῖν, δύνασθαι, εὔρεῖν) suggèrent que l'instrument est une faculté ou une action. (De Pater 1968, 184)

I suggest that the word δύνασθαι be understood to apply to all four tools, since tools seem to be abilities rather than acts. An ability is something in view of an act. Now, the word 'tool' names not an act, but something in view of one, because it enables us to do it. A knife, for example, is not the act of cutting, but something that enables one to cut.

¹ I have chosen to translate δύναμις by 'ability' for numerous reasons, without claiming that this is the only possible option. Over 'power', it has the manifest advantage of being more readily transferred to a passive sense. Over 'capacity', it has the advantage of not first signifying reception. 'Potency' also suffers from a strong active sense, as well as having no corresponding verbal form. Now, 'to be able' is used for the other forms of the verb 'can'. Smith 1997, 1 uses it, as a matter of fact, to translate δυνατόμεθα in the πρόθεσις of Chapter 1: 'The goal of this study is to find a method with which we shall be able to construct deductions from acceptable premisses concerning any problem that is proposed.'

In addition, since every tool serves for many possible acts, if, in dialectic, we conceived of a tool as an act, we would be unable to understand its unity. And this we can see better by a comparison: every virtue is in view of a multiplicity of acts. If, then, one affirmed that a moral virtue was an act, one would have to concede as many virtues as there were acts numerically or specifically different, and thus one would not be able to see the unity of the virtue.²

In fact, Alexander, when he first lists the tools, uses the word δύνασθαι for the first, third and fourth ones, as well as for the second. And he states that Aristotle calls a tool ‘that through which we will be able to abound in premises’. But ‘that through which we are able’ is an ability.

ὣν ἓν μὲν φησι εἶναι τὸ προτάσεις λαβεῖν, οὐ τὰς προτάσεις λέγων ὄργανα τῶν διαλεκτικῶν λόγων· μέρη γὰρ αὐταὶ καὶ τῶν συλλογισμῶν καὶ τῶν ἐπαγωγῶν. οὐκ ἔστι δὲ τὰ μέρη τινὸς ὄργανα ἐκείνου· ἀλλὰ ὄργανον λέγει τὸ δι’ οὗ δυνασόμεθα προτάσεων εὐπορεῖν· οὐ γὰρ αἱ προτάσεις ἀλλὰ τὸ εὐπορεῖν προτάσεων ποιῶν δύνασθαι ὄργανον. δεῦτερον δὲ φησιν εἶναι τῶν ὀργάνων τῶν πρὸς τὴν εὐπορίαν τῶν προτάσεων συντελούντων τὸ δύνασθαι τὰ πολλαχῶς λεγόμενα γνωρίζειν τε καὶ διαιρεῖσθαι, εἴτε ἐν ὀνόμασι εἴη ταῦτα εἴτε ἐν λόγοις. Τρίτον τὸ δύνασθαι τὰς διαφορὰς γνωρίζειν τινῶν, καθ’ ἃς ἀλλήλων διαφέρει. τέταρτον τὸ τὰς ὁμοιότητας τὰς ἐν τοῖς διαφέρουσιν εὐρίσκειν δύνασθαι. (Alexander, *In Top.* 88.6-16)

Albert, when he first enumerates the tools, describes the third one thus: ‘Tertium autem est differentias unius ad alterum posse invenire’ just as he described the second one, saying it is ‘quoties unumquodque dicitur posse dividere, et dividere et distinguere’ (*In Top.* 276a). Also, at the end of this same chapter, he calls each of the tools a *facultas*, which means an ability. Closer to us, De Pater and Pelletier also consider the tools as abilities:

² This is the difficulty that Socrates tries to help his interlocutors avoid when they define a virtue by enumerating virtuous acts. For example, when Socrates, in view of defining courage, insists that Laches identify ‘what is it that is the same’ in all the courageous acts first named by Laches ‘and which is called courage’, the latter ends up by answering Socrates: ‘I should say that courage is a sort of endurance of the soul, if I am to speak of the nature which pervades them all’ (190d-192c). Even this definition, however, is not quite satisfactory to Socrates. In *Republic IV* 430ab, we find this political and Platonic definition of courage: ‘this ability (δύναμις) for conserving right opinion in keeping with the law, and in respect to real or supposed dangers, I call and take for courage’. What stands out in the definition is that it is an ability.

Le noyau constitutif de l'instrument est d'être une perfection de l'esprit, donc une faculté, comme l'indique surtout le verbe δύνασθαι (105a24). (De Pater 1968, 184)³

Furthermore, since dispositions or abilities are known through their actuality, it would not be strange that Aristotle's consideration of four abilities should involve a discussion of four acts. Aquinas, in the *Sentences*, gives this as the reason for putting acts in the place of abilities to define the latter:

quia habitus per actus cognoscuntur, ideo consuetum est apud auctores ut habitus per actus definiant, ponentes actus loco habituum. (Dist. XIV q. 1 a. 1 sexta quest. obj. 1 ad 1)⁴

Following the hypothesis according to which the fallacies described in the *Sophistical Refutations* are due to an inadequate mastery of the tools, Chapter 7 (169a23 and 169b3) furnishes further evidence that the tools are essentially abilities. Indeed, the cause of two of the fallacies from language, as well as of the fallacy of accident, is said to be an inability (μὴ δύνασθαι) to carry out certain acts, namely those for which the tools are abilities. The tools that would allow one to systematically avoid these fallacies must consist, therefore, in abilities to act, not simply in these acts.

Finally, in a passage of Book VIII already mentioned, Aristotle calls an ability (in this case, dialectic) a 'tool' (14.163b9-12). Now, because of Aristotle's parsimonious use of the word 'ability' in discussing the four tools, it is good to have another place where he calls an ability a 'tool'. Moreover, the ability which is dialectic includes the four tools as parts or elements. Now, parts of an ability would seem to be abilities also. That, therefore, Aristotle should envisage an *ability* for taking premises, as is clearly what he would do in the case of the first tool, appears quite reasonable when one recalls that he is conceiving of an *ability* to syllogize starting from probable opinions. Further, he also talks about an *ability* to syllogize in the *Prior Analytics*:

πῶς δ' εὐπορήσομεν αὐτοῖς πρὸς τὸ τιθέμενον ἀεὶ
συλλογισμῶν, καὶ διὰ ποίας ὁδοῦ ληψόμεθα τὰς περὶ
ἕκαστον ἀρχάς, νῦν ἤδη λεκτέον· οὐ γὰρ μόνον ἴσως δεῖ

³ See Pelletier 1991, 323.

⁴ The objection reads as follows: 'Videtur quod sit incompetens definitio poenitentiae quam Gregorius et Ambrosius ponunt: *Poenitentia est mala praeterita plangere et plangenda iterum non committere*. I. Virtutes enim non sunt actus, sed habitus (...) Sed plangere est actus. Ergo non debet poni ut genus poenitentiae quod est virtus.'

τὴν γένεσιν θεωρεῖν τῶν συλλογισμῶν, ἀλλὰ καὶ τὴν δύναμιν ἔχειν τοῦ ποιεῖν. (*An. pr. I 27.43a20-24*)⁵

THE DIFFERENCE AND THE DEFINITION OF THE DIALECTICAL TOOL

Πρότασις λαβεῖν

Aristotle does in fact use the words προτάσεις λαβεῖν to describe the act and object of the first dialectical tool; but this sort of taking is necessary to anyone who syllogizes. Indeed, reason must assume premises before it can lay them down (τίθεμαι) in a syllogism, just as we pick up things with our hands before we lay them down.⁶ Thus, λαβεῖν is common both to the demonstrator and to the dialectician:

οὐδὲν δὲ διοίσει πρὸς τὸ γενέσθαι τὸν ἑκατέρου συλλογισμόν· καὶ γὰρ ὁ ἀποδεικνύων καὶ ὁ ἐρωτῶν συλλογίζεται λαβὼν τι κατὰ τινος ὑπάρχειν ἢ μὴ ὑπάρχειν. (*An. pr. I 1.24a25-28*)⁷

The difference is that in the case of the dialectician the act it designates follows an asking of the proposition followed by an agreement, which confirms the probability of the statement:

διαφέρει δὲ ἡ ἀποδεικτικὴ πρότασις τῆς διαλεκτικῆς, ὅτι ἡ μὲν ἀποδεικτικὴ λῆψις θατέρου μορίου τῆς

⁵ 'Now it is time to explain how we may ourselves always be supplied with syllogisms about what is set up, and the route by which we may obtain the principles concerning any particular subject. For surely one ought not only study the origin of syllogisms, but also have the power to produce them.' Smith translation, modified. As we saw in the introduction, what Aristotle describes by διὰ ποίας ὁδοῦ ληψόμεθα τὰς περὶ ἕκαστον ἀρχάς leaves us to believe in the presence of rules for instrumental inquiry in the *Prior Analytics*. As we shall see, in fact, given the natural character of the tools, every ability to argue will have recourse to the abilities to procure premises, to distinguish the meanings of words, to discover differences and to examine likeness, but the dialectician will do so in a way that is proper to him.

⁶ We thus distinguish between the act of admitting a statement and the act of laying it down as a premise because we distinguish between the legitimacy of thinking it and the pertinence it has for establishing a conclusion. In dialectic, the first aspect pertains to the tool, whereas the place guides the other aspect. See De Pater 1968, 186: 'la méthodologie du premier instrument nous apprend comment faire l'inventaire d'opinions courantes; elle nous enseigne à rédiger une sorte de fichier (...) le lieu détermine, à la lumière du problème posé, quelle donnée il faut choisir dans ce fichier (...) on se sert du premier instrument pour arriver aux données (...) on fait, en argumentant, un choix parmi les données; ce choix s'opère en vertu du lieu.'

⁷ 'This difference, however, will not affect the fact that in either case a syllogism results; for both the demonstrator and the interrogator draw a syllogistic conclusion by first assuming that some predicate applies or does not apply to some subject.' Tredennick translation

ἀντιφάσεώς ἐστὶν (οὐ γὰρ ἐρωτᾷ ἀλλὰ λαμβάνει ὁ ἀποδεικνύων), ἣ δὲ διαλεκτικὴ ἐρώτησις ἀντιφάσεώς ἐστὶν. (*An. pr.* I 1.24a22-25)⁸

λαβεῖν. C'est un terme typique, qui rend l'opération caractéristique du demandeur par son intention la plus prochaine, par son succès. Quand il fait bien son office, le demandeur obtient, en les demandant, les prémisses dont le raisonnement sera constitué. (Pelletier 1991, 118n56)

The demonstrator needs only take the premise; the dialectician must first ask before taking it. In fact, in the *Topics*, Aristotle defines the dialectical premise by the act of asking; the agreement which follows is necessary in order for the dialectician to be justified in taking the premise:

ἔστι δὲ πρότασις διαλεκτικὴ ἐρώτησις ἔνδοξος ἢ πᾶσιν ἢ τοῖς πλείστοις ἢ τοῖς σοφοῖς (*Top.* I 10.104a8-11)⁹

The fact that Aristotle says 'an asking of the probable' rather than a 'taking of the probable' reminds his reader that the dialectical premise is uncertain. Indeed, the necessity of the asking comes from the lack of certitude of the statement:

ὥστε ἔσται συλλογιστικὴ μὲν πρότασις ἀπλῶς κατάφασις ἢ ἀπόφασις τινος κατὰ τινος τὸν εἰρημένον τρόπον, ἀποδεικτικὴ δέ, ἐὰν ἀληθὴς ἢ καὶ διὰ τῶν ἐξ ἀρχῆς ὑποθέσεων εἰλημμένα, (*An. pr.* I 1.24a28-b1)¹⁰

⁸ 'The premiss of demonstration differs from the premiss of dialectic in that the former is the assumption of one member of a pair of contradictory statements (since the demonstrator does not ask a question but makes an assumption), whereas the latter is an answer to the question which of two contradictory statements is to be accepted.' Tredennick translation

⁹ In the *Prior Analytics* I 1.24a25-28, which we quoted, Aristotle calls the dialectician an asker, when he is distinguishing him from the demonstrator. See also *Sophistical Refutations* 11.172a18: 'Ἡ δὲ διαλεκτικὴ ἐρωτητικὴ ἐστὶν. See Brunschwig 1967, 118n1: 'On se souviendra néanmoins que la πρότασις est essentiellement quelque chose que l'un des interlocuteurs propose à l'acceptation de l'autre; la liaison étymologique avec le verbe προτείνειν reste opérante (cf. 104a4-5), beaucoup plus apparemment qu'entre le mot *proposition* et le verbe *proposer*.'

¹⁰ 'Thus a syllogistic premiss will be simply the affirmation or negation of some predicate of some subject, in the way already described; the premiss will be demonstrative if it is true and based upon fundamental postulates' Tredennick translation

This is so much the case that many interpreters—and I agree with them—affirm the necessity for asking and answering even when an individual is thinking by himself.¹¹

Λαβεῖν is therefore to take as a premise, either because evident, or because endoxal (it then names the act of the dialectical tool, that is to say, both the asking and the response.)¹² Thus, λαβεῖν, although common to the demonstrator and to the dialectician, still has a more precise meaning in a dialectical context. In fact, Aristotle himself says as much:

διαλεκτικῆ [πρότασις] δὲ πυνθανομένω μὲν ἐρώτησις ἀντιφάσεως, συλλογιζομένω δὲ λήψις τοῦ φαινομένου καὶ ἐνδόξου, καθάπερ ἐν τοῖς Τοπικοῖς εἴρηται. (*An. pr. I* 1.24b1-3)¹³

And although Aristotle uses the words προτάσεις λαβεῖν without the addition of 'dialectical' or 'endoxal' in Chapter 13.105a23 and 14.105a34, it is clear from the context that

¹¹ Pelletier 1991, 115-120 for example, explains that every dialectical argumentation is radically dialogical, for it always implies these two indispensable and irreducible operations, which are respectively ordered to the abundance of statements and to their endoxality. See also 153: 'deux motifs divisent le dialecticien en deux fonctions irréductibles. Il est radicalement social, parce qu'il est obligatoirement deux, demandeur et répondeur. La consistance spéciale de l'endoxe—ou plutôt son inconsistance, sa faillibilité, sa déconnexion d'avec la réalité, d'avec la vérité, d'avec l'évidence—sépare en deux opérations nettement distinctes la conception d'un énoncé et la décision d'y trouver un principe légitime d'examen et d'argumentation. Concevoir un énoncé en cette matière appelle forcément un jugement sur son caractère endoxal; ensuite, cette conception et ce jugement, relevant de talents si distincts—imagination et mémoire d'un côté, bon sens et discernement de l'autre—commandent le plus naturellement deux interlocuteurs: un demandeur, car le premier, en concevant et en formulant un énoncé, pose la question de sa recevabilité; et un répondeur, car le second, en se portant garant du caractère endoxal de l'énoncé suggéré, complète l'initiative du demandeur.' Brunschwig 1967, 118n1 also distinguishes two aspects of the dialectical statement: 'avant la prise de position du répondant, elle [la πρότασις] est une interrogation (cf. 101b29-32); après cette prise de position (qui consiste normalement à adopter le parti "endoxal"), elle devient une assertion, sur laquelle le questionneur s'appuie pour bâtir son argumentation. Ces deux aspects de la prémisse dialectique sont distingués avec clarté au début des *Premiers Analytiques* (I, 1, 24b1-3, texte qui renvoie d'ailleurs aux *Topiques*)'. See also the conclusion of *Sophistical Refutations* 34.183b3-6 where Aristotle sums up the goal of the *Topics* and *Sophistical Refutations*: οὐ μόνον τὸ λεχθὲν ἔργον ὑπεθέμεθα τῆς πραγματείας, τὸ λόγον δύνασθαι λαβεῖν, ἀλλὰ καὶ ὅπως λόγον ὑπέχοντες φυλάξομεν τὴν θέσιν ὡς δι' ἐνδοξοτάτων ὁμοτρόπως.

¹² This does not exclude, however, taking as a premise a statement because it follows from other premises that are endoxal or evident.

¹³ 'the dialectical premiss will be, for the interrogator, an answer to the question which of two contradictory statements is to be accepted, and for the reasoner, an assumption of what is apparently true and generally accepted, as has been stated in the *Topics*.' Tredennick translation, modified. See Brunschwig 1967, 14n2: 'Le verbe lambanein a, dans son usage logique, un rapport particulièrement étroit avec la *prémisse*, dont il désigne la position, ou plus précisément, en situation dialectique, l'adoption, demandée par le questionneur au répondant et obtenue du second par le premier.'

he is speaking of only this kind. Indeed, in Chapter 10, he has already distinguished the dialectical premise from other premises.

Now, the philosopher who knows the definition is apt to take the true and immediate premises from which he must proceed right away. If one wished to discourse on the preparation that disposes him for this act, one would have to refer to the seeking of the definition as this is described as a matter of fact in the *Topics*, and perhaps also in the second book of the *Posterior Analytics*. But what makes the dialectician able to take the probable premises from which he must reason is precisely everything that Aristotle names 'tool'¹⁴ and that I define as an ability to take probable premises¹⁵—we have seen that in dialectic this involves formulation, conception or request, and judgement. Indeed, Aristotle, aside from telling us that they serve for getting an abundance of arguments, is quite content to enumerate and to compare a bit what he calls 'the tools', τὰ ὄργανα. Now, as we will see, this multiplicity seems to be required by the necessity for formulating probable premises of different kinds, since nothing indicates that judging their endoxality would differ from one tool to another. Thus, these reflections on the likeness and difference of the tools will allow us to complete their definition, whose genus is 'ability'.¹⁶

Πρότασεις διαλεκτικῶς λαβεῖν

In this perspective, let us return to Chapter 14, which we described in Chapter 5, and try now to explain certain aspects of it. Aristotle starts by proposing that one way to judge of the endoxality of a proposition is obviously to check whether the definition of the endoxal applies to it, namely, that it is held by all, by most, by all of the wise, most of them or the most famous.¹⁷ But one can also simply make sure that a proposition expresses what is observed to be the case for the most part, because one can expect that all, most people, all, most of the wise

¹⁴ See Pelletier 1991, 322: 'La fécondité dialectique est d'abord fonction de l'aptitude à discerner et à recueillir l'endoxe. Sans cette faculté, nul n'attaque ni ne défend une position. C'est elle dont Aristote veut assister le développement quand il présente les instruments.'

¹⁵ This is always how Alexander describes the tools considered in general: τὰ ὄργανα πάντα πρὸς τὴν τῶν προτάσεων εὐπορίαν συντελεῖ (*In Top.* 90.2-3).

¹⁶ This way of proceeding seems to follow one of the ways for obtaining a definition as described by Aristotle in the *Posterior Analytics*.

¹⁷ I take for granted that verifying if a proposition seems so to those who are experts in some art is tantamount to seeing if it is held by the wise. See *Top.* I 14.105b1.

or the most famous would concede it, and because what is thus *admissible*—the statements that these people would admit, if asked to—is also used by Aristotle as endoxal. For, obviously, the dialectician cannot be aware of all that these groups hold as opinions about the quasi-infinite number of problems that could arise in the natural, logical and ethical domains. When one or another problem comes up, he must necessarily take as legitimate what he and his interlocutors think would be accepted by one or the other of these categories of people.

Now, statements that are admitted or endoxal by accident are also *admissible* in this way. That is, statements that acquire their endoxality because of their relation to those which are in fact admitted and endoxal.¹⁸ Either they are like them or they are the contradiction of their contraries. Nothing, however, prevents these statements from being judged endoxal otherwise than they are by those interlocutors who have recourse to these sources. Some may indeed be able to judge that they are received by all, most, all of the wise, the most of them or the most illustrious without having recourse to other endoxal propositions or to reality.

The necessity for two acts with a view to procuring probable premises—to discover them and to judge them—as well as the relation between the discovery and the tools, are rather clear. Aristotle mentions explicitly the utility of the tools, which is to abound in arguments, and obviously to do so one must discover propositions in abundance. Nonetheless, it is less evident that the tools also perfect judgement and this is rarely talked about by the commentators, except for Pelletier.¹⁹ Still, this is what we saw Aristotle showing in Chapter 14, at least for the first tool.

There he stated that the ways of choosing (ἐκλέγειν)—which here one must take as a synonym of taking or procuring (λαβεῖν)—²⁰ the probable are as numerous as the ways of defining the probable. In other words, the ways of procuring are lined up with the ways of defining; these latter will determine the object of the act of procuring:

Τὰς μὲν οὖν προτάσεις ἐκλεκτέον ὅσαχῶς διωρίσθη
περὶ προτάσεως, ἢ τὰς πάντων δόξας προχειριζόμενον

¹⁸ I take 'accidentally endoxal' in a way similar to that in which Aristotle calls things 'known accidentally' when they are known through something else (*An. post.* I 2.71b9-12). The statements I call 'accidentally endoxal' are thus those that are known to be endoxal through some other statements that are endoxal in themselves (or absolutely), that is, which seems to all, the most, all of the wise, the most or the well known.

¹⁹ See Pelletier 1991, 323.

²⁰ Bonitz 1870 (1955), 422b23-24 says that in this case, προτάσεις λαβεῖν (105a23) and προτάσεις ἐκλέγειν (105a34) are synonyms.

ἢ τὰς τῶν πλείστων ἢ τὰς τῶν σοφῶν, καὶ τούτων ἢ πάντων ἢ τῶν πλείστων ἢ τῶν γνωριμωτάτων, ἢ τὰς μὴ ἐναντίας ταῖς φαινομέναις, καὶ ὅσαι δόξαι κατὰ τέχνας εἰσίν. (*Top.* I 14.105a34-b1)

Now, as every act having for its object a proposition respecting certain criteria requires a judgement, if the taking of premises that is perfected by the first tool is thus determined by the definition of the probable, it must of necessity include a judgement. In fact, nothing in Chapter 14 seems to specifically concern the conception of probable propositions. It is the whole chapter that seems given over to the criteria upon which to judge if the propositions that are conceived are probable or not.

Πρότασεις διαλεκτικῶς λαβεῖν VERSUS διελεῖν, εὐρεῖν, σκεπεῖν

Nonetheless, in the following chapters given over to a consideration of the three last tools, Aristotle does not come back to the question of how one judges the endoxality of propositions. He is content to describe what the premises that these tools allow us to obtain have in particular. In fact, he speaks only about distinctions, differences and likeness, things that cannot enter as such into an argument. Whence, if one were to forget the dialectical context of this consideration, one might not realize that these tools are concerned with getting premises, the purpose the first tool was said to serve. This is how many commentators explain that in Chapter 13, Aristotle identifies the second, third and fourth tools with the first in respect to being called προτάσεις, which we can consider to be an abbreviation of προτάσεις λαβεῖν (105a23) or of προτάσεις ἐκλέγειν (105a34):

ἔστι δὲ τρόπον τινὰ καὶ τὰ τρία τούτων προτάσεις· ἔστι γὰρ καθ' ἕκαστον αὐτῶν ποιῆσαι πρότασιν, οἷον ὅτι αἰρετόν ἐστι τὸ καλὸν ἢ τὸ ἡδὺ ἢ τὸ συμφέρον, καὶ ὅτι διαφέρει αἴσθησις ἐπιστήμης τῷ τὴν μὲν ἀποβαλόντα δυνατόν εἶναι πάλιν λαβεῖν, τὴν δ' ἀδύνατον, καὶ ὅτι ὁμοίως ἔχει τὸ ὑγιεινὸν πρὸς ὑγίειαν καὶ τὸ εὐεκτικὸν πρὸς εὐεξίαν. ἔστι δ' ἢ μὲν πρώτη πρότασις ἀπὸ τοῦ πολλαχῶς λεγομένου, ἢ δὲ δευτέρα ἀπὸ τῶν διαφορῶν, ἢ δὲ τρίτη ἀπὸ τῶν ὁμοίων. (*Top.* I 13.105a25-33)²¹

²¹ 'In a way, the last three of these are also premisses, since it is possible to make a premiss about any of them, e.g. that either the noble, the pleasant, or the useful is choice worthy; or, that perception differs from

According to Albert, in fact, Aristotle intends to say that the interest in discovering distinctions, differences and likeness, being the discovery and formulation of propositions, taking propositions is the common intention of every tool, such that the last three are reduced to the first:

Quamvis ista quatuor sunt, non tamen quatuor artes de istis divisim tradendae sunt: quia tria istorum reducuntur ad artem primi: tria enim sequentia ad sumptionem propositionum (quae immediatum est principium syllogismi) reducuntur. Cujus probatio est, quia quodcumque sive quodlibet trium est facile propositionem dialecticam sumere, sicut patet in secundo quod est posse distinguere multiplex, ut si ponatur, quod bonum est eligendum, et potestas distinguendi quot modis dicitur bonum. Dicitur vero bonum idem quod honestum et suave sive delectabile, et dicitur bonum utile: per analogiam dicitur de istis bonum: et si quis hoc scit distinguere, facit ad facultatem sumendi propositiones. Similiter autem est in tertio quod est differentias invenire, quod similiter facit et faciliter propositiones invenire, ut si quis proponat, quoniam differt sensus a disciplina, aut negaverit illis qui dixerunt disciplinam esse cognitionem sensibilem, et verum dixerunt esse in apponendo sensibili apprehensione: considerans autem differentias sensus et disciplinae, eo quod hunc quidem sensum amittenti non est rursus sumere possibile: illam autem disciplinam amittenti rursus sumere possibile est, quia de oblivione ad scientiam est possibile devenire: et hujus differentiae et illarum differentiarum inspectione facile est propositiones sumere ad propositum. Similiter autem et quartum, quod est similitudinis inspectio, facit ad propositionum sumptionem, ut sicut se habet sanativum ad sanitatem, et euechivum ad euechiam: et qui facit similitudines propositionum proponat, quoniam similiter multas ad haec problemata propositiones sumet. Est autem euechia bona carnis condensatio in interioribus et exterioribus: quia condensata caro repellit a se contraria, quod non facit caro laxa. Sic ergo reducuntur tria ad primum. Omne quod facit ad facile sumendum propositiones, ad artem sumendi propositiones reducitur. Sed multiplicis distinctio, similitudinis consideratio, differentiarum inventio, facit ad facile sumendum propositiones. Ergo reducuntur ad artem sumendi propositiones. (Albert, *In Top.* 276-277)

Alexander also tends in this direction and affirms that the last three tools help in finding premises with a view to syllogizing and making inductions:

Τοῦτ' ἔστιν ἔστι δὲ καὶ τὰ τρία τούτων τρόπον τινὰ εἰς τὴν τῶν προτάσεων ἐκλογὴν συντελοῦντα, ἐξ ὧν οἷ τε συλλογισμοὶ καὶ αἱ ἐπαγωγαί'. Ἐκ τε γὰρ τῆς

knowledge in that it is possible to get the one back after losing it, but this is impossible for the other; or, that the healthful is in the same relationship to health as what part of a training program is to being in training. The first is a premise from what is said in many ways, the second is a premise from differences, and the third is a premise from similar things.' (My translation) Alexander also thinks that Aristotle is designating the whole first tool—act and object—by προτάσεις. He paraphrases, adding ἐκλογὴν, which he uses as a synonym for λαβεῖν.

διαίρεσεως τῶν πολλαχῶς λεγομένων προτάσεων εὐπορία γίνεται καὶ ἐκ τῆς τῶν διαφορῶν εὐρέσεως καὶ ἐκ τῆς τῶν ὁμοίων θεωρίας· αὐτὸ γὰρ διαίρεθὲν τὸ πολλαχῶς λεγόμενον πρότασις γίνεται· ὁμοίως καὶ τῶν ἄλλων ἕκαστον. (Alexander, *In Top.* 88.25-30)

We find the same idea in Maurus:

Addit Aristoteles, quod ex his quatuor instrumentis, tria reliqua reduci possunt ad primum, hoc est ad sumptionem propositionum. Probatum et explicatur. Nam ex secundo instrumento, hoc est ex distinctione, per quam explicatur ex. gr., quod bonum dicitur tripliciter, honestum, jucundum atque utile, sumitur propositio, quod eligendum est id, quod vel est honestum, vel jucundum, vel utile; ex tertio instrumento, ex. gr., ex inventione differentiae, per quam sensus differt a scientia, sumi potest haec propositio, quod sensus in hoc differt a scientia, quod sensus amissus non potest recuperari, at scientia amissa potest recuperari; ex quarto instrumento, hoc est inventione similitudinum desumi potest haec propositio, quod sicut salubre se habet ad sanitatem, sic id, quod efficit firmam corporis constitutionem, se habet ad firmam corporis constitutionem; ergo cum alia instrumenta ad id tandem conducant, ut sumantur propositiones, caetera instrumenta reducuntur ad primum, hoc est ad sumptionem propositionum. (Maurus, *In Top.* 406#1)

It is therefore for this reason, namely, because the last three tools also allow one to discover and to procure premises in abundance, as the first tool was already said to do, that Alexander, Albert, Maurus and Smith attach the last three to the first:

Aristotle's point is that the results of using the last three can be expressed as propositions. (Smith 1997, 89)²²

Nonetheless, I think there is a more precise reason why Aristotle is pointing out this attachment, and this is to make clear that the three abilities, although they each give rise to a particular kind of proposition, also imply a judgement about the endoxality of these propositions in order to legitimize taking them as premises in a dialectical argument, and that this judgement is of the same kind as the one Aristotle was talking about when describing the first tool. For nothing allows us to think that the criteria determined there should not also be applied in order to appreciate the endoxality of propositions formulated by means of the last tools. And it is quite certain that a judgement is required. When, for example, one finds a difference with the third tool, one has no authority to say by oneself, with no reference to common reaction, at least as imagined, that the statement describing this difference is probable.

²² The same idea is to be found in Waitz 1846, 449: 'Quum autem etiam reliqua tria in propositionibus investigandis versentur, ad primum caput (h. e. ad propositiones conquirendas) reducuntur omnia'.

This judgement must depend upon the comparison to what seems to all, to the most, all the wise, the most or the most known, that is, to the definition of what is probable. Whence, everything indicates that it is a question of the same criteria, and that the last three tools judge of the probability of propositions in the same way.

Thus, the second, third and fourth tools will furnish, as does the first, as much what is admitted as what is admissible, according to the judgment on the distinction of the meanings of words and the differences and likeness discovered. The propositions admitted by all, the majority, the wise, the wisest, are endoxa; the propositions admissible by all, most people, etc., because of their ties to propositions thus admitted in fact or because of observation about which one expects the same reception, will be considered as endoxa and dialectical premises.

Moreover, the description of the first tool shows other signs of community. Let us recall that in Chapter 14 Aristotle takes up a distinction of premises and problems into three genera; then he makes clear what the difference is between an investigation conducted according to truth, and a dialectical investigation; finally, he gives two rules for ordering propositions.²³ Now, these indications are no less valid for those propositions that are the objects of the last three tools than for those that come from the first. Indeed, Aristotle takes so much time with what is common to every tool in his description of the first that the reader might remain under the impression that it is the genus of the other three. The explanation given by the commentators for the clarification given in 105a25 could in fact lead in this direction.

Yet we should be aware that although Aristotle insists a great deal less on, indeed is really quite silent about, the kind of proposition that the first tool is directed to formulating, it must, nonetheless, differ from those that the other tools are directed to. And this is precisely what the first tool would have that is specific to it. Indeed, an examination of Aristotle's examples of propositions obtained by the last three tools shows that these are always complex—each time there are three or four terms involved. Now, the formulation of such propositions always presupposes that of simple propositions. One must first have considered that 'the good is the pleasant', that 'the good is the useful' and that 'the good is the noble' in order to be able to distinguish that 'the good is either the pleasant or the useful or the noble'.²⁴ In like manner, 'sensation passes', whereas 'science remains' are the occasions for

²³ *Top.* I 14.105b19-29; 105b30-31; 105b15; 105b31-37

²⁴ See *Top.* I 13.105a27-28.

discovering that ‘sensation differs from science by the fact that the latter can be recovered once lost, whereas the former cannot be’.²⁵ Finally, ‘healthy is health in a subject’ and ‘well-constituted is good constitution in a subject’, are the occasions for examining the fact that ‘healthy is to health as well-constituted is to good constitution’.²⁶ The προτάσις that is the object of the first tool would be, therefore, a simple proposition, whereas the last three tools would bear upon statements that arise from a comparison between other simples statements having already been taken by the first tool.

Consequently, the last three tools would exist in order to complete the first by making it easier for the dialectician to obtain a greater abundance of premises. The use of ποιῆσαι at 105a27 is a sign that it is the necessity for varying and specializing the act of discovery that necessitates the use of tools other than the first. Nonetheless, although they allow the discovery of different premises, their judgment on them comes about in the same way as for the first tool, so that all the instruments procure premises on the basis of the same criteria.

In Chapter 13 therefore, speaking about the ‘first tool’, Aristotle would in fact have been alluding to the genus *tool* and to one of its species without distinguishing them.²⁷ Afterwards, he presents the second, third and fourth species of tool as distinct from the first. Finally, however, (and this is the explanation I suggest for 105a25-27) Aristotle connects the second, third and fourth tools to the first. But as it is, more precisely, to the taking of probable premises that is generic to the four species of tool that the three last ones are identified, and not to the taking of *simple* probable premises that was described at the same time, Aristotle adds a distinction to his affirmation. It is partially—‘in a certain way’—that the three last tools are premises, that is to say, are a taking of *simple probable premises*. But it is absolutely that these last three are a taking of *probable premises*. Albert also speaks of the last three tools in terms of taking propositions, making it clear that these have been formulated thanks to the distinction of the multiple or the discovery of differences or likeness:

Est autem haec et prima propositio sive propositionum sumptio quoad facultatem sumendi ab eo quod est multipliciter dictum, sive a distinctione multiplicis. Secunda autem facultas sumendi est a differentiis consideratis. Tertia vero facultas sumendi propositiones est a similibus, sive a consideratione similium. Omnes ergo tres sequentes modi habendi in

²⁵ See *Top.* I 13.105a28-30.

²⁶ See *Top.* I 13.105a30-31.

²⁷ And these two, the genus and the species, would be what he is treating in Chapter 14.

sylogismis reducuntur ad primum: et ideo cum primo in eadem methodo tractandi sunt, et sic de aliis, et caetera. (Albert, *In Top.* 277a)

From this point of view, it is not the novelty of the endoxal propositions that the three last tools might procure that allows us to divide them against the first. According to many commentators, among whom Alexander, Albert, Maurus, Waitz and other more recent ones, the first tool is supposed to select ready-made propositions, whereas the last three would make new ones:

soit que les propositions approuvables existent déjà, soit qu'elles n'existent pas encore. Si elles existent, il s'agit simplement d'en faire un choix. Si elles n'existent pas, il faut les produire en regardant soit du côté des mots, soit du côté des choses: du côté des mots, avec le pouvoir de distinguer en combien de sens chacun est dit; du côté des choses en considérant les accidents communs permettant d'y trouver des différences ou d'y considérer le semblable. Les trois derniers instruments sont ainsi producteurs de propositions qui, de ce fait, deviennent objet du premier instrument, le choix. (Frappier 1974, 53)

Le premier instrument est plutôt une disposition pour découvrir de la matière que pour l'élaborer; ceci en opposition avec les autres instruments. (De Pater 1968, 155)

It is certainly of interest to note that the dialectician is not held to the use of commonplaces, of things said by everyone; that he can invent endoxa by relying on what he observes, on what is like the endoxa he has already, or what are opposed to these. But this is not involved with the distinction between the first tool and the three others: in the case of all four, such as I have presented them, there is a collecting of endoxa that have already been established, and a working out of new ones, that is to say, of propositions that are admissible by all, by most people, by the wise, etc. These admissible propositions can indeed be either simple or complex.

Nor can one divide the first two tools against the last two, claiming that the former are about intentions of reason, whereas the latter would be about things. De Pater, for example, says of the first tool:

La recherche ne s'opère pas directement sur la réalité elle-même, mais sur ce qu'on a dit ou écrit à son sujet, sur les opinions de tout le monde ou de la majorité, ou celles des sages. (De Pater 1968, 153)

Le Blond distinguishes the second and third tools by the fact that one bears on words and the other on things:

La distinction du sens des mots, l'étude du ποσυχῶς, comme dit Aristote, n'est pas identique à la recherche des différences: troisième ὄργανον, où il ne s'agit plus de l'analyse des termes mais de la comparaison des choses. (Le Blond 1939, 39)²⁸

Thionville even integrates this idea in his translation of the beginning of Chapter 13:

Les instruments, dit-il, par lesquels nous trouverons la matière des syllogismes et des inductions sont au nombre de quatre. Le premier consiste à recueillir des propositions; le second, à distinguer les objets auxquels s'applique un même terme; le troisième, à découvrir les différences des choses; le quatrième, à saisir leurs ressemblances. (Thionville 1965, 48)

Now, if this is a question of one genus and four species, as I have suggested, this intentionality would no more belong to the first two tools than to the two others. For all of them discover propositions whose endoxality must be judged by means of a comparison with what all, or most people, or the wise, etc. think. This is not peculiar to the first tool. Thus, what De Pater says applies to all the tools, according to my view and, in any case, is not so much concerned with the investigation and the discovery of propositions as with judging them. Now, every dialectical proposition, whatever the way in which it was discovered, must be related in some way to what others think.

In any case, even if one did not bring out any general characteristics among the tools, and if one continued to consider this comparison with the opinions of the aforementioned categories as being specific to the first tool, I still would not agree that the two first tools were about intentions, and the last two about things. For every proposition is about things. It is an enunciation. It expresses relations of identity, alterity, contrariety and, importantly, likeness and differences between things. Conversely, whoever conceives a likeness or a difference is already formulating a proposition. I would only admit this difference between the second tool and the others, that the discovery guided by the second tool immediately concerns words. But not so

²⁸ And here is how Le Blond 1939, 37 alludes to the fourth tool before having treated of the tools: 'l'importance donnée dans les *Topiques* au raisonnement inductif confirme que la dialectique n'est pas seulement une méthode de conversation, ou l'art d'exploiter les opinions reçues, mais qu'elle comporte aussi le regard sur les choses et inclut, par conséquent une relation à la vérité, qui la met en continuité avec la méthode proprement scientifique. L'étude de l'induction, telle qu'elle est conduite dans les *Topiques*, attire déjà l'attention sur les procédés de recherche qu'emploie la méthode dialectique: il est impossible en effet, nous l'avons constaté, de séparer entièrement l'induction de la considération des ressemblances qui la prépare et l'oriente.'

the judgment of what has been discovered by this tool. Whence, this tool is also concerned with things.

These two last ways of seeing the tools are not really foreign to one another. For, when one conceives the acts of the third and fourth tools as bearing upon things, one also comes spontaneously to realize that afterwards it is necessary to posit other operations in order to construct propositions starting with the results obtained by the only acts that are guided by these tools. This is more clearly the case for the third and fourth tools than for the second, which does not suffice either, however, for the procuring of propositions, given this way of seeing the meanings of words, the likenesses and the differences as objective realities. Yet they cannot exist without reason and its act of enunciating. One can find an example of this way of reasoning in Thionville. On *Topics* I 13.105a25, a passage for which he gives the same explanation as Alexander, Albert and Maurus, he says:

Il [Aristotle] ajoute: «Ces trois derniers instruments sont aussi, en quelque sorte, des moyens de trouver des propositions; car leurs résultats peuvent se convertir en propositions». Et il le fait voir par des exemples. En effet, il est évident qu'on peut toujours tirer une proposition, soit d'une distinction que l'on a faite entre les divers emplois d'un mot, soit d'une ressemblance ou d'une différence qu'on a découverte entre plusieurs choses; on comprend même que ces opérations diverses ne serviront dans le raisonnement qu'autant qu'on en formera des propositions, puisqu'en définitive ce sont ces dernières qui font le raisonnement. (Thionville 1965, 48)

Braun is one of the few moderns to have reflected at length on the connections between the four tools. His answer to how Aristotle proposes to get the statements that will be needed to enter into the argument (*Schluss*), and specifically, how the tools are a means thereto, is that there are two ways. First, simple statements of an endoxal character are to be constituted, and this will be by the first tool:

The first tool is characterized as the one which directly finds statements for the respective conclusion. It is only a question of knowing how this tool finds the statements in order that a necessary conclusion might follow from them. We must ask therefore according to which laws it proceeds from in enquiring about the statements. This we also learn in the *Topics*. (Braun 1959, 71, Murray translation)

Then, starting with these simple statements and by a process which must dissect these (*diareteon*), we will arrive at more particular statements. And this will be the job of the other three tools. The second tool consists in coming to a more exact perception of the meanings of

the words used in the original statements. The third and fourth tools will also come to the aid of the first. They do so by making many statements out of one.

It is therefore in this sense that the three last tools are, in a certain way, statements, although not directly so like the first tool; because they can, it turns out, furnish new statements from the results of their activities. In this respect, Braun agrees with Alexander, Albert and Maurus. His position however has this in common with mine, that it implies that the use of the first tool is presupposed to that of the three others and bears on simple premises, and this we do not find in these other commentators. The difference is that, according to Braun, once we have made use of the first tool, the use of the other three implies a dissection (*Zergliederung*) of the simple propositions obtained by the first; whereas, according to me, this subsequent use implies a comparison and composition of simple propositions.

The conclusions of Pelletier's work are less precise, but do not appear to me in disagreement with those I have proposed. First of all, he defines *the* dialectical tool as a faculty for discerning the endox (1991, 323). It is nothing less than the operation of collecting the data, which he claims Aristotle is designating by *tas protaseis labein, eklegein*, expressions with which the first tool is associated (1991, 325). It is also what he calls *the* tool that Pelletier says that the dialectician should generally use before being confronted with a particular problem, and it is the propositions obtained by *the* tool without further distinction that he speaks about ordering (1991, 327-329). Besides, he himself draws attention to this way of speaking of his subject in the singular when he starts his consideration of the multiplicity of the dialectical tool. Aristotle, he says, is nonetheless speaking about four tools. And he explains:

Aristote affirme clairement le caractère plus fondamental de cet instrument [le premier] et insiste sur ce que toute autre opération instrumentale se réduit en définitive à la découverte de propositions légitimes: «Même les trois derniers, de fait, constituent de quelque manière des propositions, car on peut, d'après chacun d'eux, produire une proposition». En conséquence, il faut se garder d'opposer les trois derniers instruments au premier comme s'ils étaient des opérations radicalement différentes. Leur lien est très étroit: ces trois instruments contiennent toujours le premier qu'ils prolongent, en quelque sorte. En effet, la découverte de propositions endoxales vise la facilité d'argumentation, comme l'annonce la définition commune des instruments: «Les instruments grâce auxquels nous abonderons en raisonnements, il y en a quatre». La méthode dialectique aura donc intérêt à orienter cette quête de manière à tourner les propositions en une matière plus proche à l'argumentation. Or, qui dit argumentation dit comparaison de choses entre elles: le problème lui-même compare déjà un sujet et un attribut: s'assimilent-ils assez pour que le second serve à la représentation du premier? Et les arguments dont procède sa solution affirmative ou négative assignent comme moyens termes les ressemblances ou les

différences de ce sujet et de cet attribut. D'instinct, en assumant, en accumulant et en ordonnant des propositions, on portera une attention particulière à ce qui regarde la comparaison des choses entre elles. Cette attention se développera spontanément en plusieurs étapes. (Pelletier 1991, 329-330)

So Pelletier also recognizes something common in the tools and he tends also to assimilate it to the first. Nonetheless, he does not identify, among the things that Aristotle enumerates when presenting the first tool, what belongs specifically to the first and what is common to all. For example, Pelletier 1991, 330 says that, 'discerner (...) ces propositions simples constitue le travail instrumental le plus élémentaire: c'est l'oeuvre du premier instrument'. I would be in agreement in as much as this is not supposed to mean that all the acts that allow one to procure simple endoxal propositions pertain properly to the first tool. It seems to me that this is only true of the discovery that contributes to procuring the simple proposition, and not of the act of judging.

OBJECTION TO THE COMMON DEFINITION

Let us take an example from the practical arts. The hammer and the saw are defined by their proper and immediate acts. If one regrouped them under a common genus, one would not be able to define them by a common end that they all serve—making a chair, for instance—because they can also serve for some other end—making a table or a rocking horse, a house, etc. Could one say, then, that they are for the purpose of building or making? Someone might object that each can equally well serve to repair or maintain, and this in respect to diverse artifacts.

Likewise, the abilities we call 'tools' are distinguished and should be defined each by their proper immediate act: to formulate simple propositions; distinguish the meanings of words; discover differences; examine likeness. As regrouped under a common genus, it comes spontaneously to mind to define it by a common end, which is taking probable premises, as we in fact did. For we saw that the dialectical tools are abilities to posit acts that all consist in special ways of getting probable premises. But then, how do we explain that the geometer, the natural philosopher, the wise man, the orator and the poet, to name only these, also formulate simple propositions, distinguish meanings of words, find differences and likeness? Indeed, it does not seem that 'to obtain endoxal premises' could constitute a proper difference for 'dialectical tool' considered as a genus, because it is not convertible with it. Since the dialectician does not seem to be the only one able to posit those acts proper to the tools, 'to obtain endoxal premises', which is proper to the dialectician, would be too narrow for defining the tool.

But do others, aside from the dialectician, really posit the acts that are perfected by the four tools of dialectic? Looking at the question closely, it seems not; at least, not quite. The abilities in question when Aristotle is treating of the dialectical tools are, I believe, partially natural ones, that must nonetheless be perfected by training, by acquired dispositions, in short, by habituation. The ability to distinguish the meanings of words is a natural one of reason. Everyone has it to a certain degree. Nonetheless, this ability can be perfected by certain rules that make it better able to reach the distinction of the *likely* meanings of words. And it is this combination of the natural ability and of those rules for distinguishing *with likelihood* the senses of words that would constitute the second *dialectical tool*. Whence, there is nothing

more natural than that the philosopher²⁹, the wise man, the orator and the poet should also distinguish the meanings of words. But they will do so differently, in a way appropriate to their goal and to their respective abilities, which are not quite the same.

The dialectician distinguishes the senses of words in such a way as to express in the clearest³⁰ possible manner the starting point from which he will attempt to move towards the truth, and he proceeds to make these distinctions in a probable way. The places that Aristotle gives in Chapter 15 for detecting equivocation are not all necessary, in fact. For instance, the place of contradiction does not apply to the term 'liberal'. Even though it has three meanings corresponding to the contrary characteristics of conservative, stingy and servile, the word 'illiberal' has only two meanings corresponding to the last two.

A philosopher will truly distinguish the meanings of words in view of expressing a truth he already has. Furthermore, he will be principally interested in those words that are proper to his discipline, whereas the dialectician is also interested in very common words. And if a demonstrator orders the meanings of words, this will only be insofar as they fall under his subject genus.

Whereas the wise man will distinguish with truth the meanings of very common words and, especially he will order them. This seems to be proper to him. We will come back to this, but for the moment let us only say that if Aristotle intends to perfect by means of dialectic not only the distinction of the meanings of words, but also the knowledge of their definition—Alexander claims that that involves a greater ability³¹—he does not give any rule concerning the order in the *Topics*. And Aquinas, when he orders the meanings of words in natural philosophy, refers to the metaphysical teachings of Aristotle:

Dicit autem quod secundum hunc octavum modum maxime proprie dicitur esse aliquid in aliquo. Unde oportet secundum regulam quam tradit in IV et

²⁹ I generally use the word 'philosopher' to designate the person having a demonstrative knowledge of a special part of philosophy, and the word 'philosophy' for these particular disciplines. I occasionally use the word 'science' or 'scientific' for the discipline or for demonstrative knowledge when the context indicates clearly that it is not a question of the modern experimental sciences.

³⁰ See *Top.* I 18.108a18.

³¹ οὕτως γὰρ ἔστιν εἰδέναι σαφῶς ὅτι πολλαχῶς λέγεται, εἰ κατὰ τὸν οἰκεῖον λόγον διάφορον τοῖς σημαυνομένοις τὴν ἀπόδοσιν ποιούμεθα ἐκάστου (Alexander, *In Top.* 97.15-17).

V *Metaphys.*, quod omnes alii modi reducantur aliquo modo ad hunc modum quo aliquid est in aliquo sicut in loco. (*In Phys.* IV 4#436)

The orator and the poet will distinguish the meanings of words, but to the degree and in the way that will serve to persuade or to please. And, as is the case for the dialectician, they will do so with no certitude. Further, they will probably be more interested in some words than in others—something that would have to be examined in more detail. For example, we know by experience that pleasing and convincing discourses are not always the clearest. Thus, whereas the dialectician must always avoid equivocation, it is not certain that this is the case for the orator, and it is even certain that equivocations, because they give him the chance to play on words, will be a considerable and even necessary aid to the poet.³²

When, therefore, others than the dialectician distinguish the meanings of words, they then only use the natural ability that is a part of the second dialectical tool, and perhaps also certain rules that belong to other methods than dialectic. But they are not distinguishing the meanings *dialectically*.

Everyone is naturally able to discover differences. 'Qui intelligit distinguit.' But it seems that different methods such as dialectic, those of the particular sciences, metaphysics, rhetoric and poetics will do so somewhat differently in respect to their different goals. The dialectician is seeking the differences between things that are close together, or at least between which he perceives a likeness. The philosopher and the wise man will do the same, with about this *difference* that they are better at it. They will be able to give an account of essential differences more quickly, without having to compare their opinions with those of others.

It is in rhetoric and in poetics that one can note other *differences*. One would expect, in fact, that the orator would mull over the differences between singulars, and it is rather evident that the poet is not really concerned about differences at all. What interests him are primarily the likenesses: they allow him to think up metaphors. Now, this is a case where the use of the ability to find likenesses is not as intimately tied to the ability for finding differences since while seeing the likeness, the poet who forms a metaphor, as well as his audience who hears it, see directly, all at once and very clearly the existence of differences between the two things that the metaphor compares. This is why there is no occasion for error here. It is even a sign of the metaphor's perfection that it allows us to seize a certain relationship between two things that

³² Shakespeare is well-known for his 'puns'.

are quite different. Furthermore, the poet has no interest in presenting in detail what the differences are between such things between which he calls up a likeness.

But to see likenesses is not something proper to the poet or the orator. It is a matter of natural talent, as Aristotle himself says:

πολὺ δὲ μέγιστον τὸ μεταφορικὸν εἶναι. Μόνον γὰρ τοῦτο οὔτε παρ' ἄλλου ἔστι λαβεῖν εὐφυΐας τε σημείον ἔστιν· τὸ γὰρ εὖ μεταφέρειν τὸ τὸ ὅμοιον θεωρεῖν ἔστιν.
(*Poet.* 22.1459a6-8)³³

The dialectician must also look for likenesses, often between things that are far apart. Why then is there no mention of a use of the fourth tool in respect to metaphors in Chapter 18 of Book I of the *Topics*? Why does Aristotle even condemn the use of metaphorical expressions in dialectic?

εἰ δὲ μὴ διαλέγεσθαι δεῖ μεταφοραῖς, δῆλον ὅτι οὐδ' ὀρίζεσθαι οὔτε μεταφοραῖς οὔτε ὅσα λέγεται μεταφοραῖς· διαλέγεσθαι γὰρ ἀνάγκη ἔσται μεταφοραῖς. (*An. post.* II 13.97b37-39)³⁴

The reason is that metaphors are based on superficial likenesses which, although they are agreeable, are not useful for knowledge. Furthermore, the obscurity to which their improper use of words inevitably leads is precisely something the second tool aims at preventing. Aquinas has a nice text on the above quote from the *Posterior Analytics*; he gives a reason for not using metaphors in dialectic. And that is that one would run the risk of passing from one subject to another in the discussion because the things put together in a metaphor are not identical:

excludit quemdam modum procedendi in definitionibus. Et dicit quod sicut non oportet disputare per metaphoras, ita etiam non oportet definire per metaphoras; utpote si dicamus quod homo est arbor inversa: nec oportet in definitionibus assumere quaecunque metaphorice dicuntur. Cum enim definitiones sint praecipua et efficacissima media in disputationibus, si definitiones darentur per metaphoras, sequeretur quod oporteret ex metaphoris disputare. Hoc autem fieri non debet, quia metaphora accipitur

³³ 'by far the greatest thing is the use of metaphor. That alone cannot be learnt; it is the token of genius. For the right use of metaphor means an eye for resemblances.' Fyfe translation

³⁴ 'If we are to avoid arguing in metaphors, clearly we must also avoid defining in metaphors and defining metaphorical terms; otherwise we are bound to argue in metaphors.' Tredennick translation

secundum aliquid simile, non autem oportet ut id quod est simile secundum unum, sit simile quantum ad omnia. (*In Post. Anal.* II 16#559)

The metaphor does not lend itself to dialectical argumentation. For example, proceeding from one place of the definition according to which what is true of the definition is also true of what is defined, as one often does, one could not conclude that what is true of an upside-down tree is also true of a man, because the first is the metaphorical definition of the second.³⁵ The dialectician, contrary to the poet, will therefore seek sufficiently essential likenesses, while being careful not to lose from view the differences, for their consideration is necessary for dialectical reasoning.

This lesser preoccupation of the poet for differences together with likenesses, as well as for the essential character of these latter, is something that the orator shares. Because he is not seeking the truth, he does not need to hone in on, or to encompass his subject; he aims neither at comprehension nor at completeness. He will get those likenesses that serve his purpose without being concerned about their necessity or about differences which would force him to qualify them. But he will seek out more the likenesses that are closer to the singular. Both for the poet and for the orator, therefore, the important thing is that the likenesses should serve their goal, and not that they should make known the nature of the things in question.

The metaphysician will treat of the likenesses more like the dialectician. He too will be interested in relations between things with a view to making them known—often between things that are very far apart. And he too will be careful not to omit their differences, whose natures he is interested in clarifying. As to the philosopher in the particular disciplines, it seems that he will be more interested in the likenesses between things in the same genus.

Moreover, the rules that Aristotle gives in Chapter 14 for distinguishing a demonstrative proceeding from an investigation carried out from opinion, the same as for distinguishing and ordering the propositions also seem to be partially common to the disciplines that are most like dialectic, namely, rhetoric, obviously, where the instrumental investigation is very similar, (we will come back to this), metaphysics and science.³⁶

³⁵ See also *Top.* IV 3.123a33; VI 2.139b33 *seq.* and *Metaph.* I 9. 991a20-22, where Aristotle censures Platonic 'paradigms' and 'participation' as empty metaphors.

³⁶ In *Metaphysics* IV, 2.1004b22-26. Aristotle says that dialectic and metaphysics differ by the mode or way of having an ability. We must see that it is the natural ability that Aristotle is evoking here and that the two disciplines have in common. Likewise, in *Rhetoric* I 1.355a2-18, where it is also a question of a common

As he is better able to find the differences and likenesses than the dialectician, since he finds the true ones, so too, the metaphysician seems better able than the dialectician to distinguish the propositions according to their immediate genera and, then, according to the kind of problem—ethical, natural or logical—to which they belong. Aristotle in fact distinguishes the sciences in Book VI of the *Metaphysics*. The metaphysician is also more able to order the propositions having the same subject by going from the more essential to the least essential and by dividing the most universal into all their subject parts. The philosopher would be able to order in these two ways the attributes proper to his subject, which is limited. He can perhaps regroup under genera subordinated to his subject genus diverse species he is studying, and must be able to recognize truly scientific premises. Aristotle does have in fact certain passages in the *Prior Analytics* that strongly remind us of those in the *Topics* concerning these rules:

Δεῖ δὴ τὰς προτάσεις περὶ ἕκαστον οὕτως ἐκλαμβάνειν,³⁷ ὑποθέμενον αὐτὸ πρῶτον καὶ τοὺς ὀρισμούς τε καὶ ὅσα ἴδια τοῦ πράγματός ἐστιν, εἶτα μετὰ τοῦτο ὅσα ἔπεται τῷ πράγματι, καὶ πάλιν οἷς τὸ πρᾶγμα ἀκολουθεῖ, καὶ ὅσα μὴ ἐνδέχεται αὐτῷ ὑπάρχειν. οἷς δ' αὐτὸ μὴ ἐνδέχεται, οὐκ ἐκληπτέον διὰ τὸ ἀντιστρέφειν τὸ στερητικόν. διαιρετέον δὲ καὶ τῶν ἐπομένων ὅσα τε ἐν τῷ τί ἐστι καὶ ὅσα ἴδια καὶ ὅσα ὡς συμβεβηκότα κατηγορεῖται, καὶ τούτων ποῖα δοξαστικῶς καὶ ποῖα κατ' ἀλήθειαν· ὅσῳ μὲν γὰρ ἂν πλειόνων τοιούτων εὐπορῆ τις, θᾶττον ἐντεύξεται συμπεράσματι, ὅσῳ δ' ἂν ἀληθεστέρων, μᾶλλον ἀποδείξει. (*An. pr.* I 27.43b1-11)³⁸

But there would be no question of a philosopher in a particular discipline distinguishing ethical, natural and logical propositions.

ability, what Aristotle is expressing is a likeness natural to human reason between the conjectural arts of dialectic and rhetoric, on the one hand, and wisdom and science, which bear on the true, on the other.

³⁷ Let us note that it is a question of *choosing premises*.

³⁸ 'Now we must select the premisses connected with each problem in the following manner. We must set down (1) the subject itself, its definitions and all its properties, (2) all the concepts which are consequence of the subject, (3) the concepts of which the subject is a consequent, and (4) the attributes which cannot apply to the subject. We need not select the concepts to which it cannot apply, because the negative premiss is convertible. We must also distinguish among these consequences those which are included in the essence, those which are predicated as properties, and those which are predicated as accidents; and of these we must distinguish those which are supposedly from those which are really associated with the subject, for the greater our supply of the latter, the sooner we shall arrive at a conclusion, and the truer they are, the more convincing will be our proof.' Tredennick translation. The last sentence recalls *Topics* I 14.105b30-31.

Besides, all of Chapters 27-30 in Book I of the *Prior Analytics* are concerned with the choice of premises both demonstrative and dialectical. Chapter 30 reads as follows:

The route is the same with respect to all things, then, whether concerning philosophy or concerning any kind of art or study whatever. For one must discern the things which belong to each term and the things to which it belongs, and be provided with as many of them as possible, and examine these things through the three terms, refuting in this way and establishing in that: when arguing in accordance with truth, this must be from things that have been strictly proved to belong in accordance with truth, but in dialectical syllogisms it is from premises according to opinion. The principles of syllogisms have been discussed in general, both how they are related and in what way one ought to hunt for them [κατὰ μὲν ἀλήθειαν ἐκ τῶν κατ' ἀλήθειαν διαγεγραμμένων ὑπάρχειν, εἰς δὲ τοὺς διαλεκτικούς συλλογισμούς ἐκ τῶν κατὰ δόξαν προτάσεων. αἱ δ' ἀρχαὶ τῶν συλλογισμῶν καθόλου μὲν εἴρηται, ὅν τρόπον τ' ἔχουσι καὶ ὅν τρόπον δεῖ θηρεύειν αὐτάς] (...) But we must make a selection about each thing that there is (for instance, about the good or science) [καθ' ἕκαστον δὲ ἐκλέγειν τῶν ὄντων, οἷον περὶ ἀγαθοῦ ἢ ἐπιστήμης]. The majority of principles for each science are peculiar to it. Consequently, it is for our experiences concerning each subject to provide the principles. I mean, for instance, that it is for astronomical experience to provide the principles of the science of astronomy (for when the appearances had been sufficiently grasped, in this way astronomical demonstrations were discovered; and it is also similar concerning any other art or science whatsoever). Consequently, if the facts concerning any subject have been grasped, we are already prepared to bring the demonstrations readily to light. For if nothing that truly belongs to the subjects has been left out of our collection of facts, then concerning every fact, if a demonstration for it exists, we will be able to find that demonstration and demonstrate it, while if it does not naturally have a demonstration, we will be able to make that evident. The way one ought to select premises has been sufficiently explained in general, then. [καθόλου μὲν οὖν, ὅν δεῖ τρόπον τὰς προτάσεις ἐκλέγειν, εἴρηται σχεδόν.] We have gone through this in detail, however, in our treatise concerning dialectic. (*An. pr.* I 30.46a2-30, Smith translation)

I think that Aristotle is referring to the *Topics* for more detailed explanations of the way to obtain premises in those cases where experience of the subject is lacking. For, in those cases where it is sufficient for grasping the definition, one is, by that very fact, in a particular science. Whence, as we already saw at the beginning of this chapter, the search for simple propositions to take as premises is also common, at least to those disciplines that have as their goal the argumentation, but it seems to require more help when it is a question of dialectical premises,

bearing, as they do, on things whose nature is hidden. Thus the act of the first tool³⁹ too will be different in each area according to the goals and the abilities of the practitioners in each, as we saw for the other natural acts perfected by the dialectical tools.

One other difference between the diverse ways that different disciplines habitually distinguish the meanings of words and examine differences and likenesses: it does not seem that when any one of these acts is performed by the philosopher, the wise man, the orator or the poet it is with a view to conceiving a proposition that is always destined to being taken as a premise of an argument. The dialectician, on the other hand, always formulates propositions for this purpose.

Thus, what appears to be really proper to the dialectician is the judgment that the propositions discovered by one of these four acts seem true to all, the majority, all or most or the wisest of the wise; or that they are like what seem to be true to such people; or that they contradict the contraries of such propositions; or, that they describe what happens most of the time.

It seems therefore that dialectic, the philosophical disciplines and metaphysics, having all as their goal the truth, will make use of all the tools, and do so more or less perfectly according as they reach more or less certitude. But given that we have a natural ability to posit the acts that the tools perfect, these acts can be posited by a person who is neither a dialectician, a philosopher, nor a metaphysician. Nonetheless, every time such an act is posited by someone other than a dialectician, it is not guided by the rules of the *Topics* and it is not followed by a judgment on the endoxality of the proposition formulated. It is, therefore, only the dialectician who really posits the acts perfected by the dialectical tools. Whence, the objection to the common definition of the dialectical tools as 'abilities ordered to obtaining probable premises' is not valid. The four abilities for positing the acts *dialectically* will be in fact always ordered to this end.

³⁹ Ross 1957, 396 sees a connection between the end of this passage of the *Prior Analytics* and Chapter 14 of Book I of the *Topics*. I am more in agreement with him than with Evans on the fact that it is not every searching for premises that Aristotle ties to the *Topics* in 46a28, but only that of dialectical ones. Nonetheless, since I think that the objection is not valid and that the dialectical tool is in fact defined by the taking of probable premises, I think that it is justified to say, as does Evans 1977, 32-33 that the passage refers as much to Chapters 15-17 of Book I of the *Topics* and to the last three tools as to Chapter 14 and the first tool.

Such a definition is more precise than simply repeating Aristotle's expression, 'that through which we will abound in syllogisms', and it helps us to see better why he affirms that the tools are 'useful with a view to the places' (*Top.* I 18.108b32-33) and therefore gives us a reason to study the tools first. If, indeed, they procure probable premises for us, this means they are at the beginning of dialectical inquiry and are presupposed to the places, whose function is to put these statements into form so as to produce the arguments wherein they figure. Dialectical abundance is first of all a function of the aptitude for discerning and gathering up probable opinions.

THE RHETORICAL TOOLS

I stated before that the orator's instrumental inquiry is very much like that of the dialectician. There are in fact passages in the *Rhetoric* that seem to consist in rules for what would correspond there to the tools. Pelletier, when claiming that it is the discernment of endoxality that the dialectical tools perfect, affirms:

C'est lors de ce premier choix que dialecticien et orateur font provision des opinions et des croyances immédiates parmi lesquelles il faudra, sur le champ d'investigation, choisir les prémisses des arguments appropriées à chaque problème. Aristote distingue explicitement les deux sélections lorsque, dans le domaine analogue de la rhétorique, il sépare l'enquête instrumentale et le choix topique comme spécifiquement autres: «À propos des enthymèmes, énonçons de façon universelle la manière dont il faut mener enquête et, après cela, les lieux. Car l'une et l'autre chose sont d'espèce différente».⁴⁰ (Pelletier 1991, 321-322)

As for the dialectical places, therefore, whose explanation has always gone by way of the *Rhetoric*, it is worth the effort to look at the *rhetorical tools* a bit when one is seeking to understand the nature of the *dialectical tools*.

The reflections in Chapter 22 which follow the passage cited by Pelletier seem to be devoted to them in large part. Aristotle points out the importance for the orator of procuring opinions that are admitted, and that are pertinent to the very precise questions he is apt to debate:

⁴⁰ Περὶ δ' ἐνθυμημάτων καθόλου τε εἴπωμεν, τίνα πρόπον δεῖ ζητεῖν, καὶ μετὰ ταῦτα τοὺς τόπους· ἄλλο γὰρ εἶδος ἑκάτερον τούτων ἐστίν (*Rh.* II 22.1395b20-22).

ὥστ' οὐκ ἐξ ἀπάντων τῶν δοκούντων ἀλλ' ἐκ τῶν ὠρισμένων λεκτέον, οἷον ἢ τοῖς κρίνουσιν ἢ οὖς ἀποδέχονται, καὶ τοῦτο δὴ ὅτι οὕτως φαίνεται, δῆλον εἶναι ἅπασιν ἢ τοῖς πλείστοις, καὶ μὴ μόνον συνάγειν ἐκ τῶν ἀναγκαίων, ἀλλὰ καὶ ἐκ τῶν ἐπὶ τὸ πολὺ. (*Rh.* II 22.1395b31-1396a3)⁴¹

Two of these remarks already remind us of Chapter 14 of Book I of the *Topics*: there we find the recommendation to take the opinions of wise people, which have every chance of being admitted by all; and to take as premises propositions describing what happens most of the time. These two rules seem to hold especially in rhetoric, since the particularity of its subjects gives more hold to those with experience than to the crowd, and since their contingency obliges one more than ever to be content with admitting what happens in most cases, rather than in all. Indeed, it is between Chapter 14 of Book I of the *Topics* and Chapter 22 of Book II of the *Rhetoric* that De Pater sees a great affinity:

Si on lit par exemple *Top.* I. 14 (le premier instrument) et *Rhét.* ii. 22 (la même chose, sans le mot d'“instrument”), on a fortement l'impression qu'il s'agisse d'une étude de chaque sujet, indépendamment d'un contexte démonstratif. (De Pater 1968, 181)

Grimaldi also notices the relation between the two chapters. About 1395b31-32, he says:

At *Top.* 105a34-b37 [Chapter 14] principles for the selection of propositions are given which are valid for rhetorical discourse. Once again we are engaged with the selection of particular topics for argument. (Grimaldi 1988, 278-279)⁴²

Aristotle then adds that one must know what one will be talking about:

Πρῶτον μὲν οὖν δεῖ λαβεῖν ὅτι περὶ οὗ δεῖ λέγειν καὶ συλλογίζεσθαι εἴτε πολιτικῶ συλλογισμῶ εἴθ' ὁποιωοῦν, ἀναγκαῖον καὶ τὰ τούτῳ ἔχειν ὑπάρχοντα, ἢ

⁴¹ 'Wherefore one must not argue from all possible opinions, but only from such as are definite and admitted, for instance, either by the judges themselves or by those of whose judgment they approve. Further, it should be clear that this is the opinion of all or most of the hearers; and again, conclusions should not be drawn from necessary premises alone, but also from those which are only true as a rule.' Freese translation

⁴² Brunschwig 1967, 131n4 also puts the first tool in relation to Chapter 22.

πάντα ἢ ἓν·α· μηδὲν γὰρ ἔχων ἐξ οὐδενὸς ἂν ἔχοις
 συνάγειν. (*Rh.* II 22.1396a4-7)⁴³

And this is what Maurus comments on:

Sed jam explicandum est, quid debeat facere orator, ut habeat copiam rerum, ex quibus possit construere enthymemata. Dicendum, quod primo debet scire omnia vel plurima spectantia ad rem, de qua agit et circa quam debet aliquid concludere syllogismo politico vel alio quolibet. Ratio est, quia ex nihilo nihil potest inferri; ergo qui nihil scit spectans ad aliquam rem, nihil poterit circa ipsam concludere. Explicatur inductione, discurrendo per omnia tria genera dicendi. (Maurus, *In Rh.* 757#3)

This is also one of the passages of this chapter of the *Rhetoric* that is sometimes compared to the instrumental inquiry of dialectic:

Sans elle [l'opération instrumentale], qui fournit la matière de toute éventuelle argumentation, le dialecticien reste impuissant et muet. «Les instruments nous procureront en abondance des arguments, dit De Pater, en livrant la matière de ces arguments, à savoir les données (concernant chaque sujet). C'est là leur utilité. Sans eux, le lieu ne prouve rien, car il n'a pas de contenu.» C'est la première chose que le dialecticien doit comprendre. Aristote le dira à propos de l'enquête similaire que doit mener l'orateur dans la recherche de ses arguments: "Ce qu'il faut comprendre en premier, c'est que concernant ce à propos de quoi il faut énoncer et raisonner, dans un raisonnement politique ou autre, il est nécessaire de tenir les données qui le concernent, ou toutes ou quelques-unes. Car si l'on n'en avait pas, on n'aurait rien d'où conclure." (*Rhét.*, II, 22, 1396a4-6.) On se trouvera ainsi en posture d'autant meilleure pour attaquer ou défendre Socrate que l'enquête aura minutieusement recueilli ce qui caractérise Socrate. De même, le dialecticien sera d'autant mieux préparé qu'il aura davantage accumulé de données endoxales sur les termes du problème. (Pelletier 1991, 324)⁴⁴

It would indeed be impossible to reason, to conclude an attribute of a subject, on the basis of the fact that another attribute of the latter is subject to the attribute that one wishes to conclude, if one did not know some of the attributes of the subject:

⁴³ 'First of all, then, it must be understood that, in regard to the subject of our speech or reasoning, whether it be political or of any other kind, it is necessary to be also acquainted with the elements of the question, either entirely or in part; for if you know nothing of these things, you will have nothing from which to draw a conclusion.' Freese translation. In his division of Chapter 22 of which 1396a4-7 constitutes one part, Grimaldi 1988, 275 says: 'material must be specific to subject under discussion'.

⁴⁴ See also Pelletier 1980, 43 on 1396a4-7: 'La nécessité, avant même de chercher vraiment à former des arguments, d'une enquête sur les caractères qui appartiennent notoirement au sujet va de soi, nous dit Aristote. C'est la première chose à comprendre et on ne peut manquer de la saisir, si on perçoit assez ce qu'est argumenter pour discerner ce qui est requis de toute argumentation, quelles qu'en soient la nature et la matière.'

λέγω δ' οἷον πῶς ἂν δυναίμεθα συμβουλεύειν Ἀθηναίοις εἰ πολεμητέον [ἢ μὴ πολεμητέον] μὴ ἔχοντες τίς ἢ δύναμις αὐτῶν, πότερον ναυτικὴ ἢ περὶ κτῆ ἢ ἄμφω, καὶ αὕτη πόση, καὶ πρόσοδοι τίνες ἢ φίλοι καὶ ἐχθροί, ἔτι τίνας πολέμους πεπολεμήκασι καὶ πῶς, καὶ τᾶλλα τὰ τοιαῦτα. (Rh. II 22.1396a7-12)⁴⁵

Being ignorant of everything about certain actions, not only would one be unable to conclude that one is useful and another not, but one would be equally incapable of concluding about one of them that it is beautiful or not. For, the panegyrists always argue starting from the fact that such and such kind of action, to which the subject is in some relation, is beautiful or is ugly:

ἢ ἐπαινεῖν, εἰ μὴ ἔχοιμεν τὴν ἐν Σαλαμῖνι ναυμαχίαν ἢ τὴν ἐν Μαραθῶνι μάχην ἢ τὰ ὑπὲρ τῶν Ἡρακλειδῶν πραχθέντα ἢ ἄλλο τι τῶν τοιοῦτων. Ἐκ γὰρ τῶν ὑπαρχόντων ἢ δοκούντων ὑπάρχειν καλῶν ἐπαινοῦσι πάντες. (Rh II 22.1396a12-15)⁴⁶

Likewise, the orator will not be able to conclude about an act that it is just or unjust unless he knows some characteristic of it that has itself some known tie to justice. For,

Ὡς δ' αὕτως καὶ οἱ κατηγοροῦντες καὶ οἱ ἀπολογούμενοι ἐκ τῶν ὑπαρχόντων σκοποῦμενοι κατηγοροῦσι καὶ ἀπολογοῦνται. (Rh. II 22.1396a21-23)⁴⁷

Thus, whatever the attribute that one wants to conclude of a subject, this will always be done by proceeding from another of its attributes which is subject to the attribute to be concluded:

καὶ γὰρ συμβουλεύοντα τῷ Ἀχιλλεῖ καὶ ἐπαινοῦντα καὶ ψέγοντα καὶ κατηγοροῦντα καὶ ἀπολογούμενον ὑπὲρ αὐτοῦ τὰ ὑπάρχοντα ἢ δοκούντα ὑπάρχειν ληπτέον, ἴν'

⁴⁵ 'I should like to know, for instance, how we are to give advice to the Athenians as to making war or not, if we do not know in what their strength consists, whether it is naval, military, or both, how great it is, their sources of revenue, their friends and enemies, and further, what wars they have already waged, with what success, and all similar things?' Freese translation. Grimaldi 1988, 275 continues about 1396a7-12: 'this exemplified for deliberative rhetoric'. Furthermore, afterwards he will also identify two passages concerning the two other genera.

⁴⁶ 'Again, how could we praise them, if we did not know of the naval engagement at Salamis or the battle of Marathon, or what they did for the Heraclidae, and other similar things? for men always base their praise upon what really are, or are thought to be, glorious deeds.' Freese translation

⁴⁷ 'Similarly, in accusation and defense, speakers argue from an examination of the circumstances of the case.' Freese translation

ἐκ τούτων λέγωμεν ἐπαινοῦντες ἢ ψέγοντες εἴ τι καλὸν ἢ αἰσχρὸν ὑπάρχει, κατηγοροῦντες δ' ἢ ἀπολογοῦμενοι εἴ τι δίκαιον ἢ ἄδικον, συμβουλευόντες δ' εἴ τι συμφέρον ἢ βλαβερὸν. (*Rh.* II 22.1396a25-30)⁴⁸

Aristotle, referring this time explicitly to the *Topics*, therefore concludes that one must procure propositions pertinent to the subject, in advance or not:

“Ὡστ’ ἐπειδὴ καὶ πάντες οὕτω φαίνονται ἀποδεικνύντες, εἴαν τε ἀκριβέστερον εἴαν τε μαλακώτερον συλλογίζονται· (οὐ γὰρ ἐξ ἀπάντων λαμβάνουσιν ἀλλ’ ἐκ τῶν περὶ ἕκαστον ὑπαρχόντων), καὶ διὰ τοῦ λόγου δῆλον ὅτι ἀδύνατον ἄλλως δεικνύναι, φανερὸν ὅτι ἀναγκαῖον, ὥσπερ ἐν τοῖς τοπικοῖς, πρῶτον περὶ ἕκαστον ἔχειν ἐξειλεγμένα περὶ τῶν ἐνδεχομένων ζητεῖν τὸν αὐτὸν τρόπον, ἀποβλέποντα μὴ εἰς ἀόριστα ἀλλ’ εἰς τὰ ὑπάρχοντα περὶ ὧν ὁ λόγος, καὶ περιγράφοντα ὅτι πλείστα καὶ ἐγγύτατα τοῦ πράγματος· ὅσῳ μὲν γὰρ ἂν πλείω ἔχη τῶν ὑπαρχόντων, τοσοῦτω ῥᾶον δεικνύναι, ὅσῳ δ’ ἐγγύτερον, τοσοῦτω οἰκειότερα (*Rh.* II 22.1396a33-1396b10)⁴⁹

48 ‘For, when advising Achilles, praising or censuring, accusing or defending him, we must grasp all that really belong, or appears to belong to him, in order that we may praise or censure in accordance with this, if there is anything noble or disgraceful; defend or accuse, if there is anything just or unjust; advise, if there is anything expedient or harmful.’ Freese translation. About 1396a24-34, Grimaldi 1988, 275 says: ‘summation: on any subject the relevant facts are necessary’. See Pelletier 1980, 43: ‘comment conseiller les Athéniens sur la guerre qu’ils projettent et faire voir son utilité ou sa nocivité en ignorant tout des Athéniens en ce domaine: leur puissance, leurs revenus, leurs alliés, leurs ennemis? Comment louer les Athéniens et montrer la beauté de leurs actions si on ne connaît aucune de ces actions? Comment juger les Athéniens sur la justice de telle ou telle de leurs actions sans avoir la moindre idée d’aucune de ses circonstances?’

49 ‘Therefore, since it is evident that all men follow this procedure in demonstration, whether they reason strictly or loosely—since they do not derive their arguments from all things indiscriminately, but from what is inherent in each particular subject, and reason makes it clear that it is impossible to prove anything in any other way—it is evidently necessary, as has been stated in the *Topics*, to have first on each subject a selection of premises about probabilities and what is most suitable. As for those to be used in sudden emergencies, the same method of inquiry must be adopted; we must look, not at what is indefinite but at what is inherent in the subject treated of in the speech, marking off as many facts as possible, particularly those intimately connected with the subject; for the more facts one has, the easier it is to demonstrate, and the more closely connected they are with the subject, the more suitable are they.’ Freese translation. We may note the resemblance between 1396b8-10 and *Prior Analytics* I 27.43b9-11 quoted above. Grimaldi 1988, 275 says of these lines: ‘demonstration of one’s subject comes only from the relevant facts; so there must be a selection of propositions which speak directly to the subject at hand’. See Pelletier 1980, 43-44: ‘Bref, quelle que soit la personne ou la chose visée, on ne peut jamais conclure à son endroit de conseil, de louange, de blâme ou de jugement que d’après des caractères qui lui appartiennent, ou tout au moins, paraissent lui appartenir (...) Aussi le premier effort de l’orateur doit-il être de découvrir le plus possible de caractères de toutes sortes liés le plus proprement possible au sujet dont il doit discuter.’

Many commentators themselves see a connection between this passage and the tools of dialectic. De Pater 1965, 148 refers to it when he explains, as do many others, that it is preferable for the tools to be deployed during a preliminary study, even if it is possible for them to be used during the discussion. Pelletier comments:

La référence [1396b3] faite aux *Topiques* (...) constitue une indication précieuse (...) Aristote nous paraît ici renvoyer assez manifestement à la description des quatre instruments du dialecticien. Ceux-ci, en effet, constituent justement les diverses opérations par lesquelles le dialecticien peut se munir, d'avance ou sur-le-champs, des propositions déjà admises ou probables concernant le sujet proposé. Cette enquête est tout à fait analogue à celle dont parle maintenant Aristote: le dialecticien, tout comme l'orateur, devra lui aussi, au cours de la discussion du problème soulevé, puiser les principes de tous ses arguments parmi les *données* fournies par cette enquête. (Pelletier 1980, 44)

Other considerations than those of Chapter 22 of Book II seem to be concerned with a rhetorical inquiry that is instrumental. Aristotle divides the subjects of rhetoric into three. Now, before enumerating the places proper to each, he seems to devote some considerations to the formation of the collection of premises which are appropriate to each of them. The case of the deliberative kind might in fact involve an entire chapter, the fourth in Book I.

Distinctis tribus generibus dicendi, descendit Aristoteles ad agendum de singulis in particulari ac primo agit de genere deliberativo; et quia circa genus deliberativum debet considerari, tum circa quid deliberatio versetur, tum finis deliberantium, ideo hoc capite agit de iis, circa quae versatur deliberatio, capite sequenti agit de fine deliberantium.—Ut igitur hoc capite agat de iis, circa quae deliberatio versatur, primo explicat generatim, quid sit id, quod in deliberationem cadit; (...) tertio enumerat quinque praecipua, circa quae versantur deliberationes, et explicat, quid circa ea debeat orator scire, ut habeat facultatem suadendi vel dissuadendi (...) Sed explicandum est, quae debeat orator circa haec scire, ut possit de singulis apte in concione disserere. (Maurus, *In Rh.* 657; 658#3)

For whomever must deliberate with a view to concluding that actions are useful or not, Aristotle explains that it is necessary to gather information concerning the aforesaid actions, and that there are five kinds of them about which men deliberate most frequently:

Σχεδὸν γάρ, περὶ ὧν βουλευόνται πάντες καὶ περὶ ἃ ἀγορεύουσιν οἱ συμβουλεύοντες, τὰ μέγιστα τυγχάνει πέντε τὸν ἀριθμὸν ὄντα· ταῦτα δ' ἐστὶν περὶ τε πόρων, καὶ πολέμου καὶ εἰρήνης, ἔτι δὲ περὶ φυλακῆς τῆς

χώρας, καὶ τῶν εἰσαγομένων καὶ ἐξαγομένων, καὶ νομοθεσίας. (Rh. I 4.1359b19-23)⁵⁰

Now, knowing that one does not deliberate about everything, it is possible to establish certain general rules to guide this collecting, for one can attach to each of these principal kinds of deliberation certain proper characteristics that will clearly have an impact on the usefulness of the foreseen actions.

Ὡστε περὶ μὲν πόρων τὸν μέλλοντα συμβουλεύειν δέοι ἂν τὰς προσόδους τῆς πόλεως εἰδέναι τίνες καὶ πόσαι, ὅπως εἴτε τις παραλείπεται προστεθῆ καὶ εἴ τις ἐλάττων αὐξηθῆ, ἔτι δὲ τὰς δαπάνας τῆς πόλεως ἀπάσας, ὅπως εἴ τις περίεργος ἀφαιρεθῆ καὶ εἴ τις μείζων ἐλάττων γένηται. (Rh. I 4.1359b23-28)⁵¹

For example, whoever wants to conclude that increasing the resources of a city is useful could argue that these resources are lesser in number than the expenses necessary for them. Their increase could therefore only be useful.

On the subject of war and peace, it is necessary to know the military might of one's city, the forces that it already possesses, and those it can count on from the outside; what wars the city has waged, and with what success, etc. Touching the defense of the country, it is necessary to know how it is defended, the number and the kind of troops that defend it, and the situation of its defenses. In respect to its imports and exports, one must know the amount and the nature of the expenses that are sufficient, the products of the soil and those that are imported, those that one must export and those that it is necessary to import. As to the laws, it is indispensable to know how many forms of constitution there are, what conditions are favorable to each, by what principles it is natural for these constitutions to be corrupted, both internal principles and contrary ones, etc.⁵²

⁵⁰ 'Now, we may say that the most important subjects about which all men deliberate and deliberative orators harangue, are five in number, to wit: ways and means, war and peace, the defense of the country, imports and exports, legislation.' Freese translation

⁵¹ 'Accordingly, the orator who is going to give advice on ways and means should be acquainted with the nature and extent of the State resources, so that if any is omitted it may be added, and if any is insufficient, it may be increased. Further, he should know all the expenses of the State, that if any is superfluous, it may be removed, or, if too great, may be curtailed.' Freese translation

⁵² According to Grimaldi 1980, 89, Aristotle in considering the 'subject matter of deliberative rhetoric' from 59b19 to 60a37.

But, obviously, as it is a question of a general method that can turn its attention to any revenue, to any war or peace, to any defense, to imports and exports and to the legislation of any city, the perfecting of the gathering of information proper to each kind necessarily has a limit, although it may be difficult to recognize,⁵³ beyond which one would no longer be dealing with a component of a method to persuade on every question, but, rather, with a science:

καθ' ἕκαστον μὲν οὖν ἀκριβὲς διαριθμησάσθαι καὶ διαλαβείναι εἰς εἶδη περὶ ὧν εἰσάσσει χρηματίζεσθαι, εἰ τι δὲ ὄσον ἐνδέχεται περὶ αὐτῶν διορίσασθαι κατὰ τὴν ἀλήθειαν, οὐδὲι κατα τὸν παρόντα καθόλου ἡγεῖν δια τὸ μῆτε τῆς ρητορικῆς εἶναι τῆχνης, ἀλλὰ ἐμφοροεστέρως καὶ μάλλον ἀληθινῆς, μάλλον τε μάλιστα δέδοσθαι καὶ αὐτῆ τῶν οἰκείων θεωρημάτων ὅτι καὶ πρότερον εἰρηκότες τυγχάνουσαν, ἀληθῆς ἐστίν, ὅτι ἡ ρητορικῆς συκρεῖται μὲν ἐκ τῆς ἀναλυτικῆς ἐπιστημῆς καὶ τῆς περὶ τὰ ἦθη πολιτικῆς, ὁμοῖα δ' ἐστὶν τὰ μὲν τῆς διαλεκτικῆς τὰ δὲ τοῖς σοφοῖς λόγοις. ὅσοι δ' ἀν τὴν ἡ τῆν διαλεκτικῆν ἢ ταύτην ἢ καθάπερ ἀνδραγαθῆς ἐπιστημῆς κατὰσκευάζειν, ἀληθεῖα τῆν φύσιν αὐτῶν ἀναλύσας τῷ μεταβαλεῖν ἐπισκευάζων εἰς ἐπιστημῆς ἀποκρίσειν αὐτῶν τινῶν πραγματῶν, ἀλλὰ μὴ μόνον λόγων. (Rh. I 4.1359b2-16)⁵⁴

53 See Rh. I 4.1358a21-26: *κατέιναι [οἱ κοῖνοι] μὲν οὖν πολιθεῖαι περὶ οὐδὲν γένος ἐμφοροῦσα. περὶ οὐδὲν γὰρ ἀποκρίσειν ἐστίν. ταῦτα [τῶν] δὲ ὄσων τις ἀνδρῶν βέλτιω ἐκλέγεται [τὰς προτάσεις], ἀληθεῖα πολιθεῖα ἀληθινῆς ἐπιστημῆν τῆς διαλεκτικῆς καὶ ρητορικῆς. ἀν γὰρ εὐτύχη ἀρχαίς, οὐκ εἶναι διαλεκτικῆς οὐδὲ ρητορικῆς ἀλλὰ ἐκείνῃ ἐστὶν ἡ εἰς εἰρή τὰς ἀρχαίς.*

54 However, there is no need at present to endeavour to enumerate with scrupulous exactness or to classify those subjects which men are wont to discuss, or to define them as far as possible with strict accuracy, since this is not the function of the rhetorical art but of one that is more intelligent and exact, and further, more than its legitimate subjects of inquiry have already been assigned to it. For what we have said before is true: that rhetoric is composed of analytical science and of that branch of political science which is concerned with ethics, and that it resembles partly dialectic and partly sophistical arguments. But in proportion as anyone endeavours to make of dialectic or rhetoric, not what they are, faculties, but sciences, to that extent, he will, without knowing it, destroy their real nature, in thus altering their character, by crossing over into the domain of sciences, whose subjects are certain definite things, not merely words. Freese translation. See Maurus, *In Rh. 658#2*: 'non est huius loci, exacte enumerare singula, circa quae deliberationes versantur, eaque suas in species distinguere ac de singulis deliberrabilium speciebus secundum veritatem determinare. Ratio est, quia in praesentia tradimus artem rhetoricam; sed non special ad Rhetoricam, sed ad facultatem nobilitatem ac virtutem, hoc est ad Politicam, exacte ac secundum veritatem determinare de singulis deliberrabilibus.'

Aristotle has thus begun to expound rules for deliberative inquiry, which are not to overlap political science in this way:

Ὅμως δὲ ὅσα πρὸ ἔργου μὲν ἐστὶ διελεῖν, ἔτι δ' ὑπολείπει σκέψιν τῇ πολιτικῇ ἐπιστήμῃ, εἴπωμεν καὶ νῦν. (*Rh.* I 4.1359b16-18)⁵⁵

It will be a question of a rough distinction of subjects about which to deliberate, of the same kind as that of syllogisms⁵⁶ and of the premises and problems⁵⁷ in the *Topics*:

licet Rhetorica non debeat exacte agere de singulis deliberabilibus, adhuc debet aliqua circa ipsa deliberare, ideoque operae pretium est, ut etiam nos quaedam dicamus de iis, quae in deliberationem cadunt, ita tamen, ut accuratiorem eorum contemplationem Politicae relinquamus. (Maurus, *In Rh.* 658#3)

Thus, the constitution of a detailed collection of facts, complete and exhaustive is not the affair of the orator, but of the historian. We will remember that Aristotle suggested that the dialectician should consult books, not write them. And he also advised him to consult the experts, not to become an expert himself. It would therefore be for the same reasons that with a view to political deliberation and legislation, Aristotle suggests that the orator consult what others write on the mores and constitutions of other countries and on human affairs. But there is no question for the orator either to run from country to country, nor to write himself:

χρήσιμον δὲ πρὸς τὰς νομοθεσίας τὸ μὴ μόνον ἐπαίειν τίς πολιτεία συμφέρει ἐκ τῶν παρεληλυθότων θεωροῦντι, ἀλλὰ καὶ τὰς παρὰ τοῖς ἄλλοις εἰδέναι, αἱ ποῖαι τοῖς ποίοις ἀρμόττουσιν. Ὡστε δῆλον ὅτι πρὸς μὲν τὴν νομοθεσίαν αἱ τῆς γῆς περίοδοι χρήσιμοι (ἐντεῦθεν γὰρ λαβεῖν ἔστιν τοὺς τῶν ἔθνων νόμους), πρὸς δὲ τὰς πολιτικὰς συμβουλάς αἱ τῶν περὶ τὰς πράξεις γραφόντων ἱστορίαι· ἅπαντα δὲ ταῦτα

⁵⁵ 'Nevertheless, even at present we may mention such matters as it is worth while to analyse, while still leaving much for political science to investigate.' Freese translation

⁵⁶ *Top.* I 1.101a18-24

⁵⁷ *Top.* I 14.105b190-29. On the practical purpose of the *Topics*, see Brunschwig 1967, XIII and Smith 1997, 41.

πολιτικῆς ἀλλ' οὐ ῥητορικῆς ἔργον ἐστίν. (*Rh.* I 4.1360a30-37)⁵⁸

Besides, *The Athenian Constitution*, a very detailed and careful work, is not at all ordered to persuasion. It is ordered to a science: politics.

After having given these rules for the *deliberative instrumental inquiry*, Aristotle announces that he is now going to furnish ways of arguing:

ἐξ ὧν δὲ δεῖ καὶ περὶ τούτων καὶ περὶ τῶν ἄλλων προτρέπειν ἢ ἀποτρέπειν, λέγωμεν πάλιν. (*Rh.* I 4.1360b1-3)⁵⁹

It is in fact in the following chapter, the fifth, that Aristotle begins to lay out the proper places, beginning with the deliberative kind. And as the orator's tools will consist in certain of the ways of gathering information, without aiming at being exhaustive, in like manner, the places of the orator will consist in certain rules given without that precision with which one would find them in a scientific treatise:

ἔτι δὲ περὶ τῶν περὶ τὰς πολιτείας ἡθῶν καὶ νομίμων διὰ τίνων τε καὶ πῶς εὐπορήσομεν, ἐφ' ὅσον ἦν τῷ παρόντι καιρῷ σύμμετρον, εἴρηται· διηκρίβωται γὰρ ἐν τοῖς πολιτικοῖς περὶ τούτων. (*Rh.* I 8.1366a19-22)⁶⁰

The places proper to the epideictic kind are shown in Chapter 9 of Book I. It will often be a case, among others, of showing that an act is beautiful because it is good and praiseworthy.

58 'Moreover, with reference to acts of legislation, it is useful not only to understand what form of government is expedient by judging in the light of the past, but also to become acquainted with those in existence in other nations, and to learn what kinds of government are suitable to what kinds of people. It is clear, therefore, that for legislation books of travel are useful, since they help us to understand the laws of other nations, and for political debates historical works. All these things, however, belong to Politics and not to Rhetoric.' Freese translation

59 'Now let us again state the sources whence we must derive our arguments for exhortation or discussion on these and other questions.' Freese translation

60 'We have now stated (...) further, the ways and means of being well equipped for dealing with the characters and institutions of each form of government, so far as was within the scope of the present occasion; for the subject has been discussed in detail in the Politics.' Freese translation

καλὸν μὲν οὖν ἐστὶν δ' ἂν δι' αὐτὸ αἰρετὸν ὃν ἐπαινετὸν ἦ, ἢ δ' ἂν ἀγαθὸν ὃν ἡδὺ ἦ, ὅτι ἀγαθόν. (*Rh.* I 9.1366a33-34)⁶¹

Whence, it will be necessary to know what is good. Now, as every virtue is good and praiseworthy, Aristotle explains what the different virtues are, along with their parts, and first in general.

εἰ δὲ τοῦτο ἐστὶ τὸ καλόν, ἀνάγκη τὴν ἀρετὴν καλὸν εἶναι. Ἀγαθὸν γὰρ ὃν ἐπαινετὸν ἐστὶν. Ἀρετὴ δ' ἐστὶ μὲν δύναμις ὡς δοκεῖ ποριστικὴ ἀγαθῶν καὶ φυλακτικὴ, καὶ δύναμις εὐεργετικὴ πολλῶν καὶ μεγάλων, καὶ πάντων περὶ πάντα. Μέρη δὲ ἀρετῆς δικαιοσύνη, ἀνδρεία, σωφροσύνη, μεγαλοπρέπεια, μεγαλοψυχία, ἐλευθεριότητα, πραότητα, φρόνησις, σοφία. (*Rh.* I 9.1366a34-1366b3)⁶²

And we note that, as the explanations of the *Rhetoric* on the constitutions remained rather undeveloped in comparison with what is to be found in the *Politics*, likewise, the discourses on the virtues that one finds there have nothing of the precision of the *Nicomachean Ethics*. Next, Aristotle enumerates virtuous acts: everything that produces virtue and that comes from virtue, the causes and the signs of virtue, will be beautiful because good. It is therefore necessary to know what are the virtuous acts:

Περὶ μὲν οὖν ἀρετῆς καὶ κακίας καθόλου καὶ περὶ τῶν μορίων εἴρηται κατὰ τὸν ἐνεστῶτα καιρὸν ἱκανῶς, περὶ δὲ τῶν ἄλλων οὐ χαλεπὸν ἰδεῖν· φανερόν γάρ ὅτι ἀνάγκη τὰ τε ποιητικὰ τῆς ἀρετῆς εἶναι καλὰ (πρὸς ἀρετὴν γάρ) καὶ τὰ ἀπ' ἀρετῆς γινόμενα, τοιαῦτα δὲ τὰ τε σημεῖα τῆς ἀρετῆς καὶ τὰ ἔργα· ἐπεὶ δὲ τὰ σημεῖα καὶ τὰ τοιαῦτα ἅ ἐστὶν ἀγαθοῦ ἔργα ἢ πάθη καλὰ, ἀνάγκη ὅσα τε ἀνδρείας ἔργα ἢ σημεῖα ἀνδρείας ἢ ἀνδρείως πέπρακται καλὰ εἶναι, καὶ τὰ δίκαια καὶ τὰ

⁶¹ "The noble, then, is that which, being desirable in itself, is at the same time worthy of praise, or which, being good, is pleasant because it is good." Freese translation

⁶² 'If this is the noble, then virtue must of necessity be noble, for, being good, it is worthy of praise. Virtue, it would seem, is a faculty of providing and preserving good things, a faculty productive of many and great benefits, in fact, of all things in all cases. The components of virtue are justice, courage, self-control, magnificence, magnanimity, liberality, gentleness, practical and speculative wisdom.' Freese translation

CHAPTER SEVEN

A FINAL LOOK AT SOME CENTRAL QUESTIONS

By way of conclusion for the theoretical part, I will undertake a few brief reflections on the order and the necessity of the dialectical tools, on their relation to reason, as well as on the order between the diverse things called 'tool' in logic.

THE ORDER OF THE FOUR DIALECTICAL TOOLS

I consider that a man's brain originally is like a little empty attic, and you have to stock it with such furniture as you choose. A fool takes in all the lumber of every sort that he comes across, so that the knowledge which might be useful to him gets crowded out, or at best is jumbled up with a lot of other things, so that he has a difficulty in laying his hands upon it. Now the skilful workman is very careful indeed as to what he takes into his brain-attic. He will have nothing but the tools which may help him in doing his work, but of these he has a large assortment, and all in the most perfect order. It is a mistake to think that that little room has elastic walls and can distend to any extent. Depend upon it there comes a time when for every addition of knowledge you forget something that you knew before. It is of the highest importance, therefore, not to have useless facts elbowing out the useful ones. (Sherlock Holmes)

To avoid having useless facts elbowing out the useful ones, the choice of commentators is important, especially with respect to a question as difficult as that of the order of the tools. Now, even if Aquinas did not comment on the *Topics*, we can still use him as an aid to understanding it. One way is to try to imitate his manner of commenting on other works of

Aristotle. Let us use as a model his way of commenting the first sentence of the *De Interpretatione*:

πρῶτον δεῖ θέσθαι τί ὄνομα καὶ τί ῥῆμα, ἔπειτα τί ἐστὶν ἀπόφασις καὶ κατάφασις καὶ ἀπόφανσις καὶ λόγος. (*Int.* 1.16a1-3)¹

Aquinas raises a question and lays out three distinctions in response to it:

Videtur autem ordo enunciationis esse praeposterus: nam affirmatio naturaliter est prior negatione, et iis prior est enunciatio, sicut genus; et per consequens oratio enunciatione. Sed dicendum quod, quia a partibus inceperat enumerare, procedit a partibus ad totum. Negationem autem, quae divisionem continet, eadem ratione praeponit affirmationi, quae consistit in compositione: quia divisio magis accedit ad partes, compositio vero magis accedit ad totum. Vel potest dici, secundum quosdam, quod praemittitur negatio, quia in iis quae possunt esse et non esse, prius est *non esse*, quod significat negatio, quam *esse*, quod significat affirmatio. Sed tamen, quia sunt species ex aequo dividentes genus, sunt simul natura; unde non refert quod eorum praeponatur. (*In Periherm.* I#10)

The problem is this: although affirmation comes naturally before negation, Aristotle puts negation first. Aquinas starts by proposing two reasons why Aristotle might place negation before affirmation.² One is taken from what comes before both of them, and the other is taken from their difference. I have tried to imitate these two ways in approaching the order of the tools of dialectic. Thus, after having attempted to understand why the ability to take simple premises is given as the first tool, we will attempt to give some reasons for the order of the remaining three, both through their distance from the first one and through how they relate to each other.

WHY THE ABILITY TO TAKE SIMPLE PREMISES IS THE FIRST TOOL

That the ability to take simple premises should be presented first is not surprising, if Aristotle is in fact also describing at the same time what is general to the four tools, namely, principally, the way in which the judgment on the probability of propositions must be carried out. The most economical way to describe many species is in fact to first give their general

¹ The Latin text is: 'Primum oportet constituere quid sit nomen, et quid sit verbum: postea quid negatio et affirmatio, et enunciatio et oratio.'

² The third part of Aquinas' response does not contradict that there is a reason or reasons for putting negation before affirmation, but it does qualify, shade, the necessity of those reasons or the degree of certitude in them.

characteristics; in this way it is not necessary to repeat these generic aspects during the consideration of each species. This is something that Aristotle explains and does,³ and that Aquinas comments on fairly often.⁴

One could also propose a reason for not separating the consideration of what is proper to the genus from what is so for one of its species. Aristotle promised us a summary presentation of the method (*Top.* I 1.101a15). Furthermore, there are other places where Aristotle does not consider the general by itself before the particular, for diverse reasons, but always serving a certain economy. We have already given some examples of this: the case of the noun and the verb in the *De Interpretatione*, and of tragedy and epic in the *Poetics*. Somewhat as in this last case, we have also seen that Aristotle has joined the *Prior* and the *Posterior Analytics* together, thus seeing the genus and its most perfect species. It is therefore certain that our interpretation of the tools does not present the drawback of being the only known example where Aristotle chooses not to devote a separate consideration to what the species he is about to consider have in common.

But a further question would be why, here in the *Topics*, he sees the genus (tool) with this particular species (the first tool)? It does not seem to me to be that it is the most perfect species to which the others are ordered, as with demonstration and tragedy, but rather it seems

³ See *Part. an.* I 1.639a12-29: 'it is clear that in the investigation of Nature, or Natural science, as in every other, there must first of all be certain defined rules by which the acceptability of the method of exposition may be tested, apart from whether the statements made represent the truth or do not. I mean, for instance, should we take each single species severally by turn (such as Man, or Lion, or Ox, or whatever it may be), and define what we have to say about it, in and by itself; or should we first establish as our basis the attributes that are common to all of them because of some common character which they possess?—there being many attributes which are identical though they occur in many groups which differ among themselves, e.g. sleep, respiration, growth, decay, death, together with those other remaining affections and conditions which are of a similar kind. I raise this, for at present discussion of these matters is an obscure business, lacking any definite scheme. However, thus much is plain, that even if we discuss them species by species, we shall be giving the same descriptions many times over for many different animals, since every one of the attributes I mentioned occurs in horses and dogs and human beings alike. Thus if our description proceeds by taking the attributes for every species, we shall be obliged to describe the same ones many times over, namely, those which although they occur in different species of animals are themselves identical and present no difference whatever.' Aristotle, after having considered this same disadvantage of repetition, answers this question in Chapter Four.

⁴ See *In Phys.* I 1#4: 'quia ea quae consequuntur aliquod commune, prius et seorsum determinanda sunt, ne oporteat ea multoties pertractando omnes partes illius communis repetere; necessarium fuit quod praemitteretur in scientia naturali unus liber, in quo tractaretur de iis quae consequuntur ens mobile in communi; sicut omnibus scientiis praemittitur philosophia prima, in qua determinatur de iis quae sunt communia enti in quantum est ens.' See also *In de Gen. et Corr.*#2: 'Est autem considerandum quod de unoquodque quod in pluribus invenitur, prius est considerandum in communi, quam ad species descendere: alioquin oporteret idem dicere multoties, ita scilicet quod in singulis id quod est commune repeteretur, sicut probat Philosophus in I de *Partibus Animalium*. Et ideo prius oportuit de generatione et corruptione in communi determinare, quam ad partes eius descendere.'

more like the case of the word and the noun, namely, that it is the species that adds the least to the genus. The first tool is the species that adds the least to the genus, since conceiving simple premises in order to take them is the easiest and most spontaneous way to conceive the premises that one will take.⁵ Nonetheless, to the degree that the acts perfected by the last three tools presuppose taking simple premises, one can say that the three tools are ordered to the first.

WHY THE ABILITY TO DISTINGUISH THE MEANINGS OF WORDS COMES SECOND

Since a premise is a statement, and a statement is composed of words, it seems natural that in the presence of a premise that has been taken one should first of all make clear in what sense the words are being used, and this sometimes allows us to discover and to take other premises. Thus, without the use of the second tool, one could not understand clearly the statements taken. For example, having taken that 'the good is what all desire', the question will naturally come to the mind of the dialectician, 'is the 'good' more than one thing?' well before it comes to his mind to compare the proposition with another, such as, for example, that 'evil is what all flee'. Thus the subsequent distinctions of its meanings, combined with the use of the first tool, will lead to taking other propositions, as, for example, 'the good is what is useful' and 'the good is the noble'. This can then be combined into the complex proposition that 'the good is either the agreeable or the useful or the noble', and then it can be affirmed that 'all pursue either the useful or the agreeable or the noble'. This is an explanation taken from the closeness of the second tool to the first.

But we can also compare the particular usefulness of the second tool with those of the two remaining tools. The tool that has as its immediate object words seems to be necessary for every kind of dialectical problem and argument. It will always be necessary for the discussion to be clear, in order that the interlocutors (or the dialectician who is investigating by himself) does not pass from one thing to another when hearing the same word, and in order to avoid errors or, again, to be able to bring them about, if need be. Now, the third and fourth tools are ordered to particular uses. Both serve for the purpose of definition; the third tool is also useful with a view to the problem of the same and the other; the fourth, for inductions and

⁵ Aristotle perhaps proceeds in a somewhat similar way in the *Topics* themselves. For example, according to Pelletier, he sets out all the common places when considering the proper places of the accident, which is the simplest attribute: only the first place given in Book II is really proper to the accident.

hypothetical syllogisms. Whence, all these utilities suppose those of the second tool, whereas the inverse is not so.

WHY THE TOOL ABOUT DIFFERENCES PRECEDES THAT ABOUT LIKENESSES

One reason why the third tool is before the fourth is that it is closer to the second tool than is the fourth. Imitating Aquinas, we can say that finding a difference is more like distinguishing the senses of a word than is the consideration of likeness, even though the genus (got by the fourth tool) is by nature before the differences (got by the third tool).

But the third tool may be before the fourth tool, not only because it is more like the second, but because it has a usefulness exclusively for negative conclusions, whereas the fourth tool presents no such utility. Now, negative conclusions come first for the dialectician:

πρῶτον οὖν περὶ τῶν καθόλου ἀνασκευαστικῶν ῥητέον
διὰ τε τὸ κοινὰ εἶναι τὰ τοιαῦτα πρὸς τὰ καθόλου καὶ
τὰ ἐπὶ μέρους, καὶ διὰ τὸ μᾶλλον τὰς θέσεις κομίζειν
ἐν τῷ ὑπάρχειν ἢ μῆ, τοὺς δὲ διαλεγομένους
ἀνασκευάζειν. (*Top.* II 1.109a 6-10)⁶

Ordo igitur consequentiae expostulat, quod primum ostendamus de universalibus qualiter terminentur, quam de particularibus: et inter universalia primum de negativo universalis, quam de affirmativo, quia negativum destructivum est: et eo quod communia sint hujusmodi universalis problemata, ut diximus, ad universalis et particularia. Negativum autem praepositur affirmativo, quia magis est de intentione opponentis negativum quam affirmativum: quia respondententes magis afferunt de inesse affirmativo quam de non inesse: disputantes opponentes destruunt (hoc est destruere conantur) et sic intendunt concludere negativam problematis. (Albert, *In Top.* 292)⁷

We already gave two other reasons. First of all, the act perfected by the fourth tool supposes that perfected by the third. To appreciate likenesses supposes taking account of differences. Also, just as the second tool helps us to avoid being deceived by the equivocation of a word, which error is more common, so putting the third tool before the fourth helps us to

⁶ 'First, then, we must speak of universally destructive methods, because such methods are common both to universal and to particular problems and because people bring forward theses asserting the presence of a predicate rather than its absence, while those who are arguing against them seek to demolish them.' Forster translation

⁷ On this passage of the *Topics* see Alexander, 131.1-19. Pelletier 1991, 337 also puts forth this reason for the fact that the ability to find differences is given before that for likenesses.

avoid being deceived by seeing the likeness of things, but not their difference, which is more common, as we said, than is the error caused by not seeing likenesses.

Nonetheless, insofar as the third and fourth tools balance each other in defining and other ways, 'non refert quod eorum praeponatur'. We must consider the likeness and difference of things and not exaggerate or emphasize one to the neglect of the other. Like affirmation and negation, the third and fourth tools are used together. To that degree, they seem to go together, as we already said.

THE NECESSITY OF THE FOUR DIALECTICAL TOOLS

Necessitas autem cuiuslibet rei ordinatae ad finem ex suo fine sumitur. Aquinas, In Post. Anal. #8

Since tools are for an end and the necessity of what is for an end must be understood from that end, it is clear that we must consider the end of the four tools of dialectic in order to understand their necessity. This means that we must understand it in the light of the πρόθεσις of the whole treatise, which is stated by Aristotle in the first sentence of the *Topics*. Thus, just as Euclid begins a theorem with a πρόθεσις (proposal or what is proposed, translated 'proposition' in Heath) in the light of which we should understand the necessity and order of the demonstration that follows, so too we must understand the necessity of the four dialectical tools in the light of the πρόθεσις set forth by Aristotle.

But unlike geometry, logic is not studied for its own sake. Hence, it would be better to also understand the necessity of the four tools in the light of those things for which dialectic is useful, the 'towards how many and what sort of things this treatise is useful' which Aristotle gives in the second chapter. But I will not go into such considerations here. I will only try to understand the necessity in the light of the immediate πρόθεσις, which is more proximate to the four tools than are the ultimate purposes.⁸

⁸ I will nonetheless remark how it is coherent that Aristotle should affirm that the third and fourth tools serve for induction and for definition. These are in fact two processes whose results are at the very beginnings of the sciences, as he himself says in *Metaphysics* XIII 4.1078b27-30: δύο γὰρ ἔστιν ἅ τις ἂν ἀποδώη Σωκράτει δικάίως, τοὺς τ' ἐπακτικούς λόγους καὶ τὸ ὀρίζεσθαι καθόλου· ταῦτα γάρ ἐστιν ἄμφω περὶ ἀρχὴν ἐπιστήμης. Now, Aristotle pointed out in Chapter 2 the contribution of dialectic for better seeing the true and the false, especially with respect to the principles.

As we already said, the necessity of the first tool is immediately clear in the light of the πρόθεσις. It is obvious that one would not be "able to syllogize from probable opinions" without the ability to judge the probability of premisses of the simplest form. But the necessity of a second, third and fourth tools is not so immediately clear. Thus, it is perhaps best to try to find a connection between the particular usefulness of each of these tools as set forth in Chapter 18 and the πρόθεσις.

In recalling that opening sentence of the *Topics*, we should note again how it touches upon the one who questions and answers:

Ἡ μὲν πρόθεσις τῆς πραγματείας μέθοδον εὐρεῖν, ἀφ' ἧς δυνησόμεθα συλλογίζεσθαι περὶ παντὸς τοῦ προτεθέντος προβλήματος ἐξ ἐνδόξεων, καὶ αὐτοὶ λόγον ὑπέχοντες μὴθὲν ἐροῦμεν ὑπεναντίον. (*Top.* I 1.100a18-21)

The second part of this clearly refers to the answerer and the first part to the questioner. Since then one cannot question and answer well and avoid serious defects of discussion (not talking about the same thing) and mind (deception due to equivocation) without the ability to distinguish the senses of words, clearly the second tool is necessary for the immediate purpose of this treatise. Achieving this would in fact be seriously threatened by the inability to ask or to answer correctly that would arise from a lack of mastery of the second tool.

As to the third tool, let's recall those words of the πρόθεσις, 'to syllogize about every proposed problem'. In Chapter 4, Aristotle gave the division of problems into four main kinds: accident, genus, property and definition. Following the beginning of Chapter 6, all of the other problems contribute to that of definition by way of the problem of the same and other, which is closely associated with it, as Aristotle showed in Chapter 5:

Μὴ λανθανέτω δ' ἡμᾶς ὅτι τὰ πρὸς τὸ ἴδιον καὶ τὸ γένος καὶ τὸ συμβεβηκὸς πάντα καὶ πρὸς τοὺς ὀρισμοὺς ἀρμόσει λέγεσθαι. δείξαντες γὰρ ὅτι οὐ μόνω ὑπάρχει τῷ ὑπὸ τὸν ὀρισμόν, ὡσπερ καὶ ἐπὶ τοῦ ἴδιου, ἢ ὅτι οὐ γένος τὸ ἀποδοθὲν ἐν τῷ ὀρισμῷ, ἢ ὅτι οὐχ ὑπάρχει τι τῶν ἐν τῷ λόγῳ ῥηθέντων, ὅπερ καὶ ἐπὶ τοῦ συμβεβηκότητος ἂν ῥηθείη, ἀνηρηκότες ἐσόμεθα τὸν ὀρισμόν· ὥστε κατὰ τὸν ἔμπροσθεν ἀποδοθέντα λόγον

ἅπαντ' ἂν εἴη τρόπον τινὰ ὀρικὰ τὰ κατηριθμημένα. (*Top.* I 6.102b27-35)⁹

καὶ γὰρ περὶ τοὺς ὀρισμοὺς πότερον ταῦτόν ἢ ἕτερον ἢ πλείστη γίνεται διατριβή. ἀπλῶς δὲ ὀρικὰ πάντα λεγέσθω τὰ ὑπὸ τὴν αὐτὴν ὄντα μέθοδον τοῖς ὀρισμοῖς. ὅτι δὲ πάντα τὰ νῦν ῥηθέντα τοιαῦτ' ἐστὶ, δῆλον ἐξ αὐτῶν. δυνάμενοι γὰρ ὅτι ταῦτόν καὶ ὅτι ἕτερον διαλέγεσθαι, τῷ αὐτῷ τρόπῳ καὶ πρὸς τοὺς ὀρισμοὺς ἐπιχειρεῖν εὐπορήσομεν· δείξαντες γὰρ ὅτι οὐ ταῦτόν ἐστὶν ἀνηρηκότες ἐσόμεθα τὸν ὀρισμόν. οὐ μὴν ἀντιστρέφει γε τὸ νῦν ῥηθέν· οὐ γὰρ ἱκανὸν πρὸς τὸ κατασκευάσαι τὸν ὀρισμόν τὸ δεῖξαι ταῦτόν ὄν. πρὸς μέντοι τὸ ἀνασκευάσαι αὐτάρκες τὸ δεῖξαι ὅτι οὐ ταῦτόν. (*Top.* I 5.102a7-17)¹⁰

Hence, a tool that is necessary for syllogisms about the same and the other and for definition is most necessary to achieve the πρόθεσις which is to syllogize *about every problem*. For not only is the problem of definition one of the problems, but all the other problems can be associated with the problem of the same and the other.

As to the fourth tool, induction could be connected in two ways with the πρόθεσις. It could be implied in the proposal with the stronger argument of syllogism. Thus, Aristotle himself, in the beginning of the *Posterior Analytics*, says that syllogisms and inductions are used in dialectical discussions (I 1.71a5-6). But since only syllogism is used explicitly in the πρόθεσις, we should also connect induction with syllogism. As every reader of the Platonic dialogues knows, Socrates often uses an induction to obtain one of the premises of a syllogism. Aristotle also notes this in Book VIII of the *Topics*:

⁹ 'We should not forget that all arguments about unique properties, genera, and accidents are also appropriate to use in connection with definitions. For if we have shown that something fails to belong uniquely to what falls under the definition (as we do in the case of a unique property), or that what is given as such in the definition is not the genus, or that something stated in the formula does not belong (as might also be said in the case of an accident), then we shall have refuted the definition. So, according to the account given previously, all the things we have enumerated would in a way be definitory.' Smith translation

¹⁰ 'For, indeed, in connection with definitions, the better part of our time is taken up with whether things are the same or different. To put it simply, let us call all those things definitory which fall under the same method as definitions (...) if we are able to argue that things are the same or that they are different, then we shall also be well provided for attacking definitions in the same way (for in showing that they are not the same we shall also have refuted the definition). But this last statement does not convert: to establish a definition, it is not sufficient to show that they are the same. However, in order to refute one, it is enough of itself to show that they are not the same.' Smith translation

Ἐπεὶ δὲ πᾶσα πρότασις συλλογιστικὴ ἢ τούτων τίς ἐστὶν ἐξ ὧν ὁ συλλογισμὸς ἢ τίνος τούτων ἔνεκα, (δηλον δ' ὅταν ἐτέρου χάριν λαμβάνηται τῷ πλείω τὰ ὅμοια ἐρωτᾶν ἢ γὰρ δι' ἐπαγωγῆς ἢ δι' ὁμοιότητος ὡς ἐπὶ τὸ πολὺ τὸ καθόλου λαμβάνουσιν) (*Top.* VIII 8.160a 35-40)¹¹

The connection of the second use of the fourth tool (hypothetical syllogisms) with the proposal is clear enough. Moreover, we have already pointed out the connection between definition and the πρόθεσις. Now, since the fourth tool is also useful with a view to definition,¹² there is no doubt that it is a necessary tool of dialectic.

THE FOUR DIALECTICAL TOOLS AND THE ABILITY THAT IS REASON

An instrument or tool is whatever is used by the principal efficient cause to obtain some end, especially in the production of something. But tools may need to be produced themselves, and to do so requires the use of yet other tools. This process cannot continue indefinitely, but must reach a first tool or tools, which are not produced, but which are given directly by nature.

Thus, in the manual arts, the production of hammers, saws, drills, etc., depends upon the use of a natural tool, the hand, and on its natural capacities. Thus, the hand, with its abilities to grasp, hold, turn, etc., is the source of those other tools that men need in order to produce things in the practical order, or to carry out certain operations.

So, too, in the activities of the intellect, the instruments or tools by which we define and reason (definitions, statements, syllogisms) must ultimately be brought back to a natural tool, reason, which, through its natural capacities for taking simple premises, distinguishing the senses of words, discovering differences and examining likenesses, is able to produce these other tools. And according as these capacities are further perfected by certain rules or others, reason will produce acts such as to obtain demonstrative or dialectical syllogisms, etc.

¹¹ 'since every premiss used in reasoning is either one of the constituents parts of the reasoning or else is assumed for the sake of one of these parts (and it is obvious when it is assumed for the sake of something else from the asking of many similar questions; for people usually secure the universal either by induction or by similarity)' Forster translation

¹² I have only considered the connection between the definition and the *about every problem proposed* of the πρόθεσις. But maybe there is also a link between the definition and *sylogism* of the πρόθεσις, since the first is the ideal middle term of the second.

If these abilities were not first of all natural, it would be necessary to look for something even more natural before them. But as these abilities are absolutely first, there cannot be something before them. We see this by the fact that all the other tools come after. Thus, these abilities of reason, perfected by rules of arts, are necessarily the first tools in every part of logic.

**THE FOUR TOOLS OF DIALECTIC AND THE OTHER USES OF 'TOOL' IN LOGIC:
THE ORDER BETWEEN ALL THESE 'TOOLS'**

The tools of dialectic are so called by Aristotle himself, and it seems allowable to call the natural abilities which contribute to their formation 'tools'. Definition, statement and syllogism are also called 'tools' by the commentators, as well as is logic as a whole. It would therefore seem appropriate to explain that all these uses of the word 'tool' are not univocal and to reflect upon the order among its meanings.

What, therefore, we designate by the word 'tool' is not the same thing. The genus of what we shall simply call 'tools' is natural ability, whereas the genus of 'dialectical tools' is ability, but as perfected by a method. And it is also such an ability that we are naming when we say of logic that it is a 'tool'. Finally, speech, i.e., vocal sound signifying by convention, and having parts that themselves signify, is the genus of definition, statement and syllogism, which are also called 'tools'. Indeed, definition is speech signifying what a thing is distinctly; statement is speech signifying the true or the false; syllogism is speech, in which some statements being laid down, some other statement follows necessarily because of those laid down.

Now, the natural abilities for taking simple premises, for distinguishing the senses of words, for discovering differences and examining likenesses would seem to be more properly named 'tools' since reason makes use of these always in view of something else. But if reason possesses certain natural tools, it must nonetheless make other tools in order to reach its perfection in all its complexity. As Aquinas explains it:

Quod autem non est naturalis nobis acquirimus per id quod est naturale:
sicut etiam in exterioribus per manus instituimus omnia artificialia. (*Cont.
Gent.* II 83)

Thus, it produces definitions, statements and syllogisms. Now these in their turn are also called 'tools' because they help the natural abilities of reason in their pursuit of something other than them. In fact, definition is in view of understanding what a thing is; statement is for

understanding the true and the false; syllogism is for coming to some kind of knowledge of a statement from other statements, and because of them. Nonetheless, definitions and demonstrations themselves in each of the particular sciences constitute major works of reason; in this respect they would seem to be ends rather than means. This is one reason why Aristotle should call the natural abilities 'tools' before these, since a tool is always useful for something other than itself.

Finally, reason can also perfect its natural abilities through the acquisition of firm dispositions or habits. And this is how it is related to the 'tools of dialectic', as well as to the whole of logic. These are ultimately called 'tools' because they enable reason to better make its non natural tools.

It is interesting to note that it is the second place of the third group of places presented in Chapter 15 that has to be used to determine that the word 'tool' does not have the same meaning when said of the natural abilities, and when said of definition, of statement and of syllogism, and when said of the dialectical tools (as well as of all of logic). In fact, natural abilities, methods and speech fall under three different and non subordinated genera of quality.

PART TWO

Aristotle's Use of the Four Tools in His

Philosophical Treatises:

A Few Examples

CHAPTER EIGHT

SOME APPLICATIONS OF THE TOOLS IN *DE ANIMA* III

THE DISTINCTION OF THE KINDS OF KNOWLEDGE

We will now take a careful look at the use of the tools in Book III of the *De Anima*, where we can easily find a variety of problems requiring all four. Our study will thus be of necessity one requiring us to follow the arguments in considerable detail. To help in doing so, we will call upon the major commentators on the text.

Aquinas, in his commentary, clearly enough lays out Aristotle's intention in Book III, along with the classical division of it. It is justifiable to take up the consideration of the intellect in a separate book, he explains, for as Aristotle will show, the intellect is not a sense. Whence, it deserves to be taken up apart.¹ Although it is sufficiently evident that the intellect is not one of the external senses,² that it is in no way a sense is less evident, so Aristotle must inquire if there is another sense apart from the five external ones already studied in order to show that the intellect is in no way a sense power before he starts to investigate its nature.

¹ See Aquinas, *In de Anima*, III l#564. It is surprising that the Leonine Edition should make of this lesson of Aquinas on the intellect, which he manifestly placed at the beginning of the Book III of his commentary, the 25th chapter of Book II.

² Aquinas is making use of the third instrument to find the difference between intellect and the external senses: 'intellectus non est aliquis de sensibus exterioribus de quibus dictum est, quia non coartatur ad unum genus sensibilibium cognoscendum'.

To the first question, Aristotle answers that, 'one may be satisfied that there are no senses apart from the five (I mean vision, hearing, smell, taste and touch) from the following arguments'.³ First of all, he shows that there is no other sense able to know the proper sensibles. We will start by giving a summary of the argument that Aristotle is going to present to support this conclusion. Its dialectical character is evident from the weakness of the premises. Whoever has a sense organ thanks to which certain sensibles are apt to be known, knows all these sensibles by this organ. Now, perfect animals possess all the organs of sense. Therefore, they know all the sensibles. As, however, these animals have only the five senses already discussed, it follows that there exists no other sense than the five that would have as its object proper sensibles.⁴

Aristotle starts by supposing that whatever has a sense organ knows all the sensibles proper to that organ. Now, he makes this fact clear in respect to touch, since the number of tangible qualities is evident. He already established that these qualities are the differences of the elementary bodies as bodies, that is, those qualities by which these elements are distinguished from one another, namely, hot and cold, wet and dry (*De an.* II 1.423b27-29). It is, therefore, known to us that we sense all the tangible qualities. Whence, Aristotle concludes *per simile*, for the other senses, that whoever has an organ senses all the sensibles apt to be known by it (*De an.* III 1.424b24-27).

³ ὅτι δ' οὐκ ἔστιν αἴσθησις ἑτέρα παρὰ τὰς πέντε (λέγω δὲ ταύτας ὄψιν, ἀκοήν, ὄσφρησιν, γεῦσιν, ἀφήν), ἐκ τῶνδε πιστεύσειεν ἄν τις (*De an.* III 1.424b22-24, Hett translation). That this involves a problem is attested to by the fact that Democritus had admitted the possibility that other creatures might have senses we don't have. This would thus involve a disagreement among the wise. See Rodier 1900, 347. Unless otherwise indicated, the translations from the Greek of the *De Anima* are by W.S. Hett, Loeb Classical Library.

⁴ At first sight this argument might appear to be circular. Aristotle is showing that animals have all the senses by basing himself on the fact that they know all the sensibles. Now, how can he assume they know all the sensibles except by invoking their possession of all the senses? Indeed, it seems that it would be precisely in discovering a sixth sense that someone would discover that he didn't know all the sensibles. Likewise, it is by recovering a sight that he never had before that someone truly becomes aware that before he did not have knowledge of the visible. Nonetheless, we have to see that it is possible to verify the fact that animals know all the sensibles (in order to conclude that they possess all the senses), otherwise than by checking that they have all the senses, and this is just what Aristotle does, which exonerates him from the charge of circular argumentation. He examines something closer to the sensible object than the sense ability itself, namely, the organs. It is, in fact, because the perfect animals, at least, possess all the organs that Aristotle affirms that they have all the senses. He does not, therefore, say that because they have all the senses animals know all the sensibles and that, consequently, they have all the senses.

Now, agent and patient, since they must be alike in genus,⁵ and given that it is the medium which acts in fact on the organ,⁶ the constitution, and consequently, the number of sense organs will be determined by the simple bodies that make up the media involved in perception. Now, because of their ability to undergo, says Aristotle, air and water must be parts of every bodily organ. Consequently, since all animals have touch and perfect animals have in addition sight, hearing and smell, and these require air or water as a medium, perfect animals possess all the sense organs (namely, the one—touch—which senses directly or by flesh, its conjoined medium, as well as those organs which perceive via an exterior medium: sight, hearing and smell through air and water).⁷

Aristotle thus concludes, dialectically, that perfect animals know all the sensibles proper to the five sense organs that they possess. Indeed, the syllogistic premises by which Aristotle establishes this depend upon a knowledge of the natural world such as it has always appeared to us. They thus seem to be probable statements. Besides, that 'all the possible objects of our sense organs are known to us' seems to have been *taken* as probable thanks to the first dialectical tool, because of its likeness to a simple statement that also seems true to all, namely, that 'we know all the tangible qualities by the organ of touch', which presupposes another statement, seeming true to all, namely, that 'these qualities, objects of touch, are the hot, the cold, the wet and the dry'. Moreover, that perfect animals not only possess the organs of touch and taste, but also of sight, hearing and smell, which organs are made up of water and air, could well have been discovered by observing 'what happens in all or most cases' among sensible beings.

Such experience cannot furnish the kind of perfectly universal and necessary affirmation apt to find its place in a demonstration:⁸ it does not allow us to affirm with certitude that whoever has an organ perceives all the possible objects able to affect in any way this organ, nor that perfect animals have all the possible sense organs. One thus has only a *ut nunc* universal that Aquinas describes as useful for the dialectician, but insufficient for the

⁵ *De an.* II 4.416a22-25; 5.417a1; *Gen. corr.* I 7.323b18

⁶ *De an.* II 7.419a18

⁷ *De an.* III 1.425a3-11

⁸ See *An. post.* I 4.73a 20-24.

demonstrator.⁹ Besides, Aquinas, who adds that ‘potest aliquis sufficienter moueri ad credendum quod non sit alius sensus preter quinque iam dictos’,¹⁰ explains admirably why Aristotle’s conclusion is only probable:

Procedit autem hec ratio, ut manifeste apparet, ex determinato numero elementarum, ex quo probauit quod organa sensuum qui sunt per media exteriora fiunt per aerem et aquam tantum, et iterum ex determinatione passionum elementorum, que sunt qualitates tangibiles, unde per eas fit notum quod omnes qualitates tangibiles cognoscimus; et ideo concludit quod nullus sensus deficit nobis, nisi aliquis dicere uelit quod sit aliquod corpus elementare preter quatuor elementa et quod sint alie passione que possunt tactu discerni que non sunt alicuius corporum hic existencium et nobis notorum, et hoc uidetur inconueniens; unde relinquitur quod sint tantum quinque sensus, qui a nobis habentur. (Aquinas, *In de Anima*, III l#574)

Aristotle points out in fact that his argument is only valid if one admits that there are only four elements in the sublunary world. It is evident that if there existed some unknown element, a new and other αἰσθηριον, formed from that unknown element could be imagined. But this is for Aristotle a vain hypothesis.

Many more serious objections are possible, even without talking about the existence of another element. If, for instance, following Aristotle’s text, two different kinds of sensibles pass through the same medium, how would one explain then that the organ made up of this medium does not in fact sense both? Indeed, the ear hears sound in the air without perceiving the color in the air.

Conversely, one and the same sensible can pass through many media (color can in fact pass through air and water), and it would suffice for an organ to be made up of one of these media to perceive this sensible in all of its media. But how do we explain that an organ made of water, such as the eye, can perceive a sensible transmitted by the air? Difficult, but are we to deny that the eye does see color through the air? The argument is therefore much weaker than what Aquinas admits.

⁹ *An. post.* II 4.73a28-32 and Aquinas, I 9#78-80

¹⁰ This is how he interprets the ἐκ τῶνδε πιστεύσειεν ἄν τις by which Aristotle starts his argument in 424b23-24.

We may, however, be in the presence of an argument to establish the minor by the final cause (*De an.* III 1.425a8 *seq.*) that should not escape our attention, since it is much more convincing than those through the efficient and material causes just given. All perfect animals must have all their organs (the ones they should have, we must add). They must, therefore, have all the sense organs. Now, to say that these animals have all the sense organs is to say that they have all those necessary to perceive all the sensibles necessary for their perfection, and this means that they need not possess those that are not necessary for their perfection. Thus, even with this argument, we cannot conclude that all perfect animals have all possible senses and, therefore, that there are only five senses.

Aristotle next moves on to consider whether there could be a possible sixth sense whose proper object would be the common sensibles already spoken of.¹¹ In order to exclude this, he seems to be reasoning hypothetically. He first lays down the conclusion, and denies the consequent of a major conditional, explaining that the common sensibles are not perceived accidentally (or incidentally) by the five external senses. Indeed, since they have a proper action on them, they are known through themselves:

Ἄλλὰ μὲν οὐδὲ τῶν κοινῶν οἷόν τ' εἶναι αἰσθητήριόν τι ἴδιον, ὧν ἑκάστη αἰσθήσει αἰσθανόμεθα κατὰ συμβεβηκός¹², οἷον κινήσεως, στάσεως, σχήματος, μεγέθους, ἀριθμοῦ, ἑνος· ταῦτα γὰρ πάντα κινήσει αἰσθανόμεθα, οἷον μέγεθος κινήσει· ὥστε καὶ σχῆμα· μέγεθος γὰρ τι τὸ σχῆμα. τὸ δ' ἡρεμοῦν τῷ μὴ κινεῖσθαι· ὁ δ' ἀριθμὸς τῇ ἀποφάσει τοῦ συνεχοῦς καὶ τοῖς ἰδίοις· ἑκάστη γὰρ ἐν αἰσθάνεται αἰσθησις. (*De an.* III 1.425a14-20)¹³

Furthermore, this sixth sense would be moved as such by many diverse objects, which is impossible. Indeed, both sight and touch, for example, when they perceive the common

¹¹ *De an.* II 6

¹² Torstrik, Neuhaeuser, Susemihl and Biehl put the negative οὐ before the words κατὰ συμβεβηκός. But many commentators agree that the addition of this adverb is not necessary. Aristotle is expounding a theory he opposes, not his own doctrine. See Rodier 1900, 353.

¹³ 'But, again, it is impossible that there should be a special sense organ to perceive common sensibles, which we perceive incidentally by each sense, such, I mean, as motion, rest, shape, magnitude, number and unity; for we perceive all these things by movement; for instance we perceive magnitude by movement, and shape also; for shape is a form of magnitude. What is at rest is perceived by absence of movement; number by the negation of continuity, and by the special sensibles; for each sense perceives one kind of object.'

τοῖς ἰδίοις· ἐκάστη γὰρ ἐν αἰσθάνεται αἴσθησις. (*De an.* III
1.425a14-20)¹³

Furthermore, this sixth sense would be moved as such by many diverse objects, which is impossible. Indeed, both sight and touch, for example, when they perceive the common sensibles, do so because these common sensibles affect their proper object with which they form a unity: it is colored magnitude and hard magnitude which move sight and touch. It is through the proper sensible that the common sensible affects the sense organ *per se*: a large area of color does not affect the eye the same as a small area, and the same for the other senses. In fact, there would not even be any perception of color, if the color were not extended. Thus the two kinds of sensible, proper and common, are necessarily perceived together, even though they are different kinds of sensibles.

Aristotle then repeats the conclusion and lays down the major whose formulation presupposes a likeness between the relation common sensibles-sixth sense, and the relation sweet-taste: as sweet is properly perceived by taste, likewise, the common sensibles are perhaps perceived properly by some sixth sense. Thus, if the common sensibles are truly related to this sixth sense the way sweet is related to taste, then they would be related only accidentally to the five known senses, just as sweet is to sight:¹⁴

ὥστε δῆλον ὅτι ἀδύνατον ὄτουοῦν ἰδίαν αἴσθησιν εἶναι
τούτων, οἷον κινήσεως· οὕτω γὰρ ἔσται ὥσπερ νῦν τῇ
ὄψει τὸ γλυκὺ αἰσθανόμεθα. (*De an.* III 1.425a20-22)¹⁵

Now, we already saw that the common sensibles are not accidental sensibles, since they affect the five senses directly, something accidental sensibles do not.

In order to confirm this last point, Aristotle distinguishes—the third tool may come into play here—two sorts of sensible by accident and shows that the common sensibles are neither

¹³ 'But, again, it is impossible that there should be a special sense organ to perceive common sensibles, which we perceive incidentally by each sense, such, I mean, as motion, rest, shape, magnitude, number and unity; for we perceive all these things by movement; for instance we perceive magnitude by movement, and shape also; for shape is a form of magnitude. What is at rest is perceived by absence of movement; number by the negation of continuity, and by the special sensibles; for each sense perceives one kind of object.'

¹⁴ The sweet, the same as all tastes, is only accidentally perceived by sight.

¹⁵ 'Thus it is clearly impossible for there to be a special sense of any of these common sensibles, e.g., movement; if there were, we should perceive them in the same way as we now perceive what is sweet by sight.'

sort in regard to the five external senses. The first kind of sensible by accident is that to which Aristotle alludes when speaking about the perception of sweetness by sight. If sight allows us to discern sweetness it is because we have at the same time the sensation of color and that of this taste, and then this object which we see as a proper object of sight because of its color is also an object that tastes sweet. We thus see the sweet, but accidentally, since it coincides with the color:

τοῦτο δ' ὅτι ἀμφοῖν ἔχοντες τυγχάνομεν αἴσθησιν, ἢ
καὶ ὅταν συμπέσωσιν ἀνα γνωρίζομεν. (*De an.* III 1.425a22-24)¹⁶

But there is a second kind of accidental sensible, things which really do not deserve to be called sensible at all. When, for example, seeing some white object we judge that it is the son of Cleon. Such knowledge is accidental because it happens to this white thing which we see to be the son of Cleon.¹⁷ But in this case it is not accidentally sensible by one sense because it is the proper object of another; rather it is completely accidental to it to be sensed, and this is what distinguishes it from the first kind:

εἰ δὲ μή, οὐδαμῶς ἂν ἀλλ' ἢ κατὰ συμβεβηκὸς
ἠσθανόμεθα, οἷον τὸν κλέωνος υἱὸν οὐχ ὅτι κλέωνος
υἱός, ἀλλ' ὅτι λευκός· τούτῳ δὲ συμβέβηκεν υἱῶ
κλέωνος εἶναι. (*De an.* III 1.425a24-26)¹⁸

But why does Aristotle feel the need to deny that the common sensibles are accidental objects of the five external senses in this way? This is not something that follows from the hypothesis he is trying to refute, namely that the common sensibles are the object of some sixth sense, but rather that they are the objects of the intellect. What we must not forget is that the intellect's not being a sense is still in doubt at this point of the treatise; to show this is so is precisely one of the objects of this book.

¹⁶ 'But we do this because we happen to have a sense for each of these qualities, and so recognize them when they occur together.' This is how Aquinas describes the sensing of sweet by sight: 'sicut nunc est quod uisu sentimus dulce: hoc enim est quia nos habemus sensum utriusque, scilicet et albi et dulcis, et ideo, quando coincidunt in unum, illud quod est unius sensus cognoscitur per accidens ab alio' (*In de Anima*, III 1#579).

¹⁷ See *De an.* II 6.418a20.

¹⁸ 'otherwise we should never perceive them except incidentally, as, e.g., we perceive of Cleon's son, not that he is Cleon's son, but that he is white; and this white object is incidentally Cleon's son.'

Aristotle pursues his reflections a bit further: not only, as we previously saw, do the common sensibles affect the senses, but they do so by some sensing which is common to the five senses and which is not accidental:

τῶν δὲ κοινῶν ἤδη ἔχομεν αἴσθησιν κοινήν, οὐ κατὰ
 συμβεβηκός· οὐκ ἄρ' ἐστὶν ἰδίᾳ· οὐδαμῶς γὰρ ἂν
 ἦσανόμεθα ἀλλ' ἢ οὕτως ὥσπερ εἴρηται τὸν κλέωνος
 υἱὸν ἡμᾶς ὀρᾶν. (*De an.* III 1.525a27-30)¹⁹

Thus the negation of the consequent of the conditional proposition forces one to reject the hypothesis, as Aristotle is doing here once again explicitly, that the common sensibles are the proper objects of a sixth sense.

Aristotle tells us that the reason for a plurality of senses perceiving the common sensibles is to be taken from the necessity for perceiving them distinctly when they accompany, as they always do, the proper sensibles. Indeed, if we had only sight to sense magnitude, since sight must first perceive the color in the magnitude, we would be unable to distinguish between the color and the magnitude: every color would be a magnitude and every magnitude a color, so to say. Thus the fact that magnitude is perceived by another sense shows us that magnitude is something other than color. And the same for the other common sensibles:

νῦν δ' ἐπεὶ καὶ ἐν ἐτέρῳ αἰσθητῷ τὰ κοινὰ ὑπάρχει,
 δῆλον ποιεῖ ὅτι ἄλλο τι ἕκαστον αὐτῶν. (*De an.* III 1.425b9-
 11)²⁰

Having shown that aside from the five external senses there is no other proper sense, Aristotle now asks if there exists a sense faculty common to these five. In order to resolve the question, he asks if there are activities not proper to one sense which would seemingly require a common sense faculty.

The first that he mentions is the activity by which we perceive the activities of the proper senses, as when we sense that we are seeing and sense that we are hearing:

¹⁹ 'But we have already a common faculty which apprehends common sensibles directly. Therefore there is no special sense for them. If there were, we should have no perception of them, except as we said that we saw Cleon's son.'

²⁰ 'the fact that common sensibles inhere in the objects of more than one sense shows that each of them is something distinct.' See Maurus, *In De an.* 77#8.

Ἐπεὶ δ' αἰσθανόμεθα ὅτι ὁρώμεν καὶ ἀκούομεν, ἀνάγκη ἢ τῆ ὄψει αἰσθάνεσθαι ὅτι ὁρᾷ, ἢ ἑτέρᾳ. (*De an.* III 2.425b12-13)²¹

He first furnishes two reasons in support of the position that one senses that one is seeing by sight. If one sensed seeing by another sense, this other sense would have to sense color in addition to seeing and, thus, two senses would have color as a proper object. The hypothesis is not receivable, for sight in the act of seeing is the same as the visible in actuality (*De an.* III 2.425b26-27). Furthermore, it would also be necessary to ask if this sense perceives that it senses and, if not, seek a third sense to perceive that. Either, therefore, this process will go on indefinitely (which is impossible, since an action that depends on an infinite number of agents can never come to completion), or it will end up with a sense that judges its own perception. But then there is no justification for refusing this ability to the first of the senses, namely sight in respect to its own seeing. It seems therefore that one cannot separate 'seeing seeing' from 'seeing the visible', and that perception of sight in its actuality of seeing and perception of the visible must be found in one and the same sense.

Aristotle then furnishes an argument in support of the position that we sense that we see by another sense and, since the previous arguments presented some element of likelihood, as is the case for every dialectical argument, he thus ends up establishing a problem. He puts us in fact in the presence of contrary arguments in respect to a question, so that the difficulty is to know what position is true, since one can produce convincing arguments on both sides:

ἔχει δ' ἀπορίαν· εἰ γὰρ τὸ τῆ ὄψει αἰσθάνεσθαί ἐστιν ὁρᾶν, ὁρᾶται δὲ χρῶμα ἢ τὸ ἔχον, εἰ ὄψεταί τις τὸ ὁρῶν, καὶ χρῶμα ἔξει τὸ ὁρῶν πρῶτον. (*De an.* III 2.425b17-20)²²

If we sense we are seeing by means of sight, and if 'sense by sight' is nothing other than to see, we therefore see ourselves seeing. Now, nothing can be seen unless it is a color or colored. If, therefore, someone sees himself seeing, he has to be colored, whereas it was stated previously that the receptacle for color had to be necessarily without color (*De an.* II 7.418b26-29).

²¹ 'Since we can perceive that we see and hear, it must be either by sight itself, or by some other sense.'

²² 'But here is a difficulty; for if perception by vision is seeing, and that which is seen either is colour or has colour, then if one is to see that which sees, it follows that what primarily sees will possess colour.'

Aristotle resolves this problem by explaining that sight does not have color as its sole object, and that in a certain way vision is colored. Indeed, it is because each sense organ receives the sensible quality without matter that the one who sees is colored in some way, and thus it is the faculty which has color as its object, namely sight itself, that perceives what is seeing as such. Aristotle's first affirmation which explains how sensing by sight also implies the perception of the act of seeing, may call upon the second tool:

φανερὸν τοίνυν ὅτι οὐχ ἔν τὸ τῆ ὄψει αἰσθάνεσθαι· καὶ γὰρ ὅταν μὴ ὀρώμεν, τῆ ὄψει κρίνομεν καὶ τὸ σκότος καὶ τὸ φῶς, ἀλλ' οὐχ ὡσαύτως. (*De an.* III 2.425b20-22)²³

Thus, we have to distinguish two senses of 'to perceive by sight': seeing color from seeing seeing, and from not seeing. Thus, when the color has disappeared, we can become aware ('see') that we are not 'seeing' in the darkness where we are.²⁴

The following affirmations explain that that which sees does in a sense possess color because of the identity of the sense in actuality and the sensible in actuality. Aristotle seems to be making use of the second, third and fourth tools:

Ἡ δὲ τοῦ αἰσθητοῦ ἐνέργεια καὶ τῆς αἰσθήσεως ἡ αὐτὴ μὲν ἐστὶ καὶ μία, τὸ δ' εἶναι οὐ ταῦτὸν αὐταῖς· λέγω δ' οἷον ψόφος ὁ κατ' ἐνέργειαν καὶ ἀκοὴ ἢ κατ' ἐνέργειαν· ἔστι γὰρ ἀκοὴν ἔχοντα μὴ ἀκούειν, καὶ τὸ ἔχον ψόφον οὐκ ἀεὶ ψοφεῖ. ὅταν δ' ἐνεργῆ τὸ δυνάμενον ἀκούειν καὶ ψοφῆ τὸ δυνάμενον ψοφεῖν, τότε ἢ κατ' ἐνέργειαν ἀκοὴ ἅμα γίνεται καὶ ὁ κατ' ἐνέργειαν ψόφος, ὧν εἴπειν ἄν

²³ 'It is therefore obvious that the phrase "perceiving by vision" has not merely one meaning; for, even when we do not see, we discern darkness and light by vision, but not in the same way.'

²⁴ 'soluit propositam dubitationem duobus modis. Primo, concludens ex predictis quod sentire uisu multipliciter dicitur. Ostensum est enim supra, quod uisu sentimus nos uidere. Item ostensum est, quod uisu non sentimus, nisi colorem. Sentire ergo uisu dupliciter dicitur. Uno modo, secundum quod uisu sentimus nos uidere. Alio modo, cum uisu uidemus colorem. Et quod uisu sentire dicatur multipliciter, ex hoc apparet quod aliquando dicimur sentire uisu cum uisus presencialiter inmutatur a uisibili, scilicet colore, aliquando autem discernimus uisu et tenebras et lumen etiam cum non uidemus, per inmutationem scilicet ab exteriorii sensibili, set non similiter dicitur utroque modo uisu sentire. Redit ergo solutio ad hoc quod actio uisus potest considerari uel secundum quod consistit in inmutatione organi a sensibili exteriori, et sic non sentitur nisi color, unde ista actione uisus non uidet se uidere; alia est actio uisus secundum quod post inmutationem organi iudicat de ipsa perceptione organi a sensibili etiam abeunte sensibili, et sic uisus non solum colorem sentit, set sentit etiam uisionem coloris' (Aquinas, *In de Anima*, III 2#588). Aquinas' analysis reveals that he detects a use of the second tool. Perhaps we may be allowed to think that this pertains to the place of definitions. See *Topics* I 15.107b5. Indeed, in the definition of sight as 'a change of the organ caused by color', the change can be present or past.

τις τὸ μὲν εἶναι ἄκουσιν τὸ δὲ ψόφησιν. (*De an.* III 2.425b26-426a1)²⁵

I mean the actual sound and the actual hearing; for it is possible for one who possesses hearing not to hear, and that which has sound is not always sounding. It is not the sense in ability and the sensible in ability that are the same, but the two when in actuality. Perhaps it is a question here of things in different genera: the sense in ability being a quality, the sense in actuality an undergoing; the sensible in ability being a quality, the sensible in actuality an acting upon.²⁶ Thus one must see the distinction between four meanings here²⁷ in order to be able to understand, thanks to the third and fourth tools, how the acts of the sense and of the sensible are alike. Indeed, *to be the same in subject but different in essence* is only said of the sense and of the sensible in act, not of the sense in ability. *The activity of the sensible object and of the sensation is one and the same.* Aristotle is here answering the question asked in 425b17, rejecting the refutation drawn from the fact that sight cannot be colored. Whoever concludes that sight cannot see itself underestimates the likenesses between vision and the visible.

But this error as to the likeness does not seem to consist in *what seems so to all*. Indeed, this likeness is manifest in most cases, such that the difficulty consists more in finding the difference. Indeed, as we saw, many have described knowledge as a correspondance between the known object in itself and this object as it exists in the soul. If the soul knows, they say, it is necessary that the thing known exist in the knower in the same way as it exists in itself. Now, in so doing they have failed to use the third tool, and thus to find the difference between the way a thing is in the mind, the eye or the imagination and the way it is in itself.²⁸ A sign of

²⁵ 'The activity of the sensible object and of the sensation is one and the same, though their essence is not the same; in saying that they are the same, I mean the actual sound and the actual hearing; for it is possible for one who possesses hearing not to hear, and that which has sound is not always sounding. But when that which has the power of hearing is exercising its power, and that which can sound is sounding, then the active hearing and the active sound occur together; we may call them respectively audition and sonance.'

²⁶ See *Top.* I 15.107a5.

²⁷ ἡ μὲν οὖν τοῦ ψοφητικοῦ ἐνέργειά ἐστι ψόφος ἢ ψόφησις, ἡ δὲ τοῦ ἀκουστικοῦ ἀκοή ἢ ἄκουσις· διττὸν γὰρ ἡ ἀκοή, καὶ διττὸν ὁ ψόφος. ὁ δ' αὐτὸς λόγος καὶ ἐπὶ τῶν ἄλλων αἰσθήσεων καὶ αἰσθητῶν (*De an.* III 2.426a6-8). See Aquinas, *In de Anima*, III 2.#593: 'Actus igitur sonatiui uel soni est sonatio, actus autem auditui est auditio: dupliciter enim dicitur auditus et sonus, secundum actum et secundum potenciam.'

²⁸ Aquinas, following Aristotle's famous expression, explains that these ancient philosophers were 'forced' by a truth that they only partially knew. They 'couldn't miss' the likeness between the thing known and the knower, but because they were 'sleeping' (*somniabant*), they missed the difference. Indeed, it is true that

the identity often attributed to the sense and to the sensible is that often the act by which the sensible acts on the sense in such wise as to become in some way one with it is not named; only the act of the subject which undergoes is named, sensation being conceived as almost entirely dependant upon the sensing subject:

ὅταν δ' ἐνεργῆ τὸ δυνάμενον ἀκούειν καὶ ψοφῆ τὸ δυνάμενον ψοφεῖν, τότε ἢ κατ' ἐνέργειαν ἀκοὴ ἅμα γίνεται καὶ ὁ κατ' ἐνέργειαν ψόφος, ὧν εἶπεν ἄν τις τὸ μὲν εἶναι ἀκουσιν τὸ δὲ ψόφησιν. (...) ἐπ' ἐνίων μὲν ὠνόμασται, οἷον ἢ ψόφησις καὶ ἢ ἀκουσις, ἐπὶ δ' ἐνίων ἀνώνυμον θάτερον· ὄρασις γὰρ λέγεται ἢ τῆς ὄψεως ἐνέργεια, ἢ δὲ τοῦ χρώματος ἀνώνυμος, καὶ γεῦσις ἢ τοῦ γευστικοῦ, ἢ δὲ τοῦ χυμοῦ ἀνώνυμος. (*De an.* III 2.425b29-426a15)²⁹

But for hearing we have two words: 'hear' for the undergoing in the sensing subject, and 'sound' for the action of the sensed object. It is, therefore, necessary to be aware that certain sensations imply many things that can be named by the same word—the third and second tools come into play here. For example, the word 'touch', does not simply designate what the sense undergoes, in this case the hard and soft, etc, but also the action exerted by the sensible, here what is hard or soft, the tangible.³⁰

That sight must not be colored would therefore be probable, less naively, *seeming so to the wise*, for example, to those who have followed how Aristotle the psychologist proceeded in

knowledge comes about through the presence of a likeness of the thing known in the knower, but these two, while one in subject, are not so in their essence, no more than they are always one in subject. The sense and the sensible, when they are only in ability, remain numerically distinct beings. See *In de Anima*, I 4#43.

²⁹ 'When that which has the power of hearing is exercising its power, and that which can sound is sounding, then the active hearing and the active sound occur together; we may call them respectively audition and sonance (...) In some cases we have names for both, such as sonance and audition, but in others one of the terms has no name; for the activity of vision is called seeing, but that of colour has no name; the activity of taste is called tasting, but that of flavour has no name.' The opinion according to which the sense seeks out the form in the object is another sign that the role of the sensible in the process of sensation is often neglected.

³⁰ See Maurus, *In De an.* 79#6: 'sicut sensibile est in actu per hoc, quod sentiatur, sic sensus est in actu per hoc, quod sentiat; sed sentiri ac sentire sunt idem ac differunt solum ratione, in quantum sentiri est actus sentiendi ut procedens ab objecto sensibili, sentire est ipse actus sentiendi ut receptus in sensu.'

Book II,³¹ where he rehabilitates the difference between the sense and its object. Now, some of his listeners exaggerated his affirmation that sight cannot be colored. Since the senses receive the forms of the sensibles, the sense and the sensible in act (sight and the visible in act) are one in subject: 'the movement, that is, the acting and being acted upon, takes place in that which is acted upon (...) the activity of what is moving and active takes place in what is being acted upon' (*De an.* III 2.426a1-5).³² Whence the sense in act being the same as the sensible in act, and sight in act the same as the visible in act, sight is in some way colored. Thus, the knowledge of the visible in act is simultaneously knowledge of sight in act, and both pertain to the same ability; seeing also involves sensing that one is seeing.³³

The actuality of the sensible object and of the sense is one and the same, though their essence is not the same. Aristotle takes care to point out the difference also: the sense and the sensible in act differ in definition. The third tool would thus be necessary for those who adhere to the probable for all (in order to find the difference that they did not suspect)³⁴; the fourth tool would be necessary for those who adhere to what is probable for the wise (to make clear what the difference consists in; it is indeed necessary that the use of the third tool be balanced by the recognition of likenesses).

This having been said, Aristotle can explain an error of the relativists—the tools are being applied—which consists in thinking that the sensibles cannot exist without the sensing subject, an error which could have been avoided by using the second tool. If it is true that the 'sensible' can never find its act of being a motor outside sensation, it does nonetheless exist

³¹ ἔστι δὲ χρώματος μὲν δεκτικὸν τὸ ἄχρουν (*De an.* II 7.418b26-29). What is receptive of color must be without color, just as that which is receptive of sound must be without sound. Nothing receives what it is already, as Aquinas explains. See *In de Anima*, II 15#427. Nonetheless, the mistake of conceiving sight as absolutely without color might have been avoided by taken account of the text in *De Anima* II 12.424a17-26, where Aristotle already affirms that sense is a faculty apt to receive sensible forms without the matter to the degree that these forms exist differently in the sense and in things.

³² See *De an.* III 2.426a9-11: ὡσπερ γὰρ ἡ ποίησις καὶ ἡ πάθησις ἐν τῷ πάσχοντι ἀλλ' οὐκ ἐν τῷ ποιούντι, οὕτω καὶ ἡ τοῦ αἰσθητοῦ ἐνεργεία καὶ ἡ τοῦ αἰσθητικοῦ ἐν τῷ αἰσθητικῷ. Movement is the actuality of the motor in the mobile. See also *Ph.* III 3.202a13-202b29.

³³ ὁ δ' ὁρῶν ὅτι ὄρα αἰσθάνεσθαι καὶ ὁ ἀκούων ὅτι ἀκούει (*Eth. Nic.* IX 9.1170a29-33). The verb αἰσθάνεσθαι, which generally signifies *to perceive, to sense by the senses*, can also mean *to be aware of; to sense* also has these two meanings.

³⁴ Thus there is not an absolute identity of the two, and the soul is not the things it can know, nor is it made up of their principles.

both as a reality in itself and as sensible in ability independently of the sense in act. The sensible enjoys a certain anteriority in relation to the sense.³⁵

ἔπει δὲ μὲν ἐστὶν ἐνέργεια ἢ τοῦ αἰσθητοῦ καὶ ἢ τοῦ αἰσθητικοῦ, τὸ δ' εἶναι ἔτερον, ἀνάγκη ἀμὰ φείρεσθαι καὶ σῶλεσθαι τὴν οὐσίαν λέγομένην ἀκρίην καὶ ῥῶπον, καὶ χυμὸν δὴ καὶ γέυσιν καὶ τὰ ἀλλὰ ὁμοίως. τὰ δὲ κατὰ δύναμιν λέγομενα οὐκ ἀνάγκη, ἀλλ' οἱ πρότερον φυσιολόγοι τοῦτο οὐ καλῶς ἔλεγον, οὐθέν οἰόμενοι οὔτε λευκὸν οὔτε μέλαν εἶναι ἀνευ ὀψέως, οὐδὲ χυμὸν ἀνευ γέυσεως. τῆ μὲν γὰρ ἔλεγον ὀψέως, τῆ δ' οὐκ ὀψέως. διχῶς γὰρ λέγομένης τῆς αἰσθησεως καὶ τοῦ αἰσθητοῦ, τῶν μὲν κατὰ δύναμιν τῶν δὲ κατ' ἐνέργειαν, ἐπὶ τούτων μὲν συμβαίνει τὸ λεχθῆναι, ἐπὶ δὲ τῶν ἐτέρων οὐ συμβαίνει. ἀλλ' ἐκεῖνοι ἀπλῶς ἔλεγον περὶ τῶν λέγομένων οὐχ ἀπλῶς. (*De an.* III 2.426a15-26)³⁶

Perhaps the act of the sensible, since it is often unnamed, as we saw, leads us to believe that the sensible is always in act and, therefore, simultaneous with the sense. Indeed, the imposition of a name designating the act would lead one to think that it can be sensible in ability and therefore exist without the sense.

This operation by which we sense that we are seeing or that we are hearing or touching does not however require one common ability able to judge the acts of the senses. Aristotle therefore now seeks to establish the necessity of such a sense faculty starting with another operation: to distinguish the diverse sensibles from one another. Now, to do so, he uses the third tool to distinguish two kinds of difference:

ἔκαστη μὲν οὖν αἰσθησις τοῦ ὑποκειμένου αἰσθητοῦ ἐστίν, ὑπαρχούσα ἐν τῷ αἰσθητικῷ ἢ αἰσθητήριον, καὶ κριθεὶ τὰς τοῦ ὑποκειμένου αἰσθητοῦ διαφοράς, οἷον λευκὸν μὲν καὶ μέλαν ὄψις, τὸ γλυκὺ δὲ καὶ πικρὸν

³⁵ See *Car. 7.7b36; Metaph. IV 5.1010b30-1011a2* where Aristotle criticizes Protagoras' relativism.

³⁶ since the activity of the sensible and of the sense is the same, though their essence is different, it follows that hearing in the active sense must cease or continue simultaneously with the sound, and so with flavour and taste and the rest; but this does not apply to their potentialities. The earlier natural philosophers were at fault in this, supposing that white and black have no existence without vision, nor flavour without taste. In one sense they were right, but in another wrong: for the terms sensation and sensible being used in two senses, that is potentially and actually, their statements apply to the latter class, but not to the former. These thinkers did not distinguish the meanings of terms which have more than one meaning. We have here a kind of confirmation that the procedure of the passage analyzed above was carried out by the use of the second tool.' See Aquinas, *In de Anima*, III 2#595.

γεῦσις. ὁμοίως δ' ἔχει τοῦτο καὶ ἐπὶ τῶν ἄλλων. ἐπεὶ δὲ καὶ τὸ λευκὸν καὶ τὸ γλυκὺ καὶ ἕκαστον τῶν αἰσθητῶν πρὸς ἕκαστον κρίνομεν, τίτι καὶ αἰσθανόμεθα ὅτι διαφέρει; ἀνάγκη δὴ αἰσθήσει· αἰσθητὰ γὰρ ἐστίν.
(*De an.* III 2.426b8-15)³⁷

Each sense distinguishes the differences of its proper object. Not only, however, do we distinguish white from black, and sweet from bitter, but also white from sweet and, indeed, all the sensibles from one another whatever the proper sense to which they belong, so that these operations necessarily depend on sense. To know the sensibles as sensibles can in fact only belong to sense: we know the difference between white and sweet not only as to their essence by the intellect (assuming we did) but also as to the particular changes they cause in the sense, and this can only belong to a sense power.

Furthermore, this sense power can only be one:

οὔτε δὴ κεχωρισμένοις ἐνδεχεται κρίνειν ὅτι ἕτερον τὸ γλυκὺ τοῦ λευκοῦ, ἀλλὰ δεῖ ἐνὶ τινὶ ἄμφω δῆλα εἶναι. οὕτω μὲν γὰρ κἂν εἰ τοῦ μὲν ἐγὼ τοῦ δὲ σὺ αἰσθητοί, δῆλον ἂν εἴη ὅτι ἕτερα ἀλλήλων. (*De an.* III 2.426b17-20)³⁸

Aristotle makes use of the fourth tool in order to establish a proportion which is first used in an hypothetical syllogism by which he makes known the unity of the sensitive ability, discriminating between the sensibles from an operation of the intellect, here taken as more known, namely, the negation expressing the difference sensed. Indeed, the unity of the individual speaking about the difference between the sensibles leads us to presume the unity of the sense perceiving the difference between the sensibles, for a man has the same relation to the division of concepts as sense ability to the perception of sensibles. In both cases it is a question of a judgement on the difference between things which are nonetheless compared by something that is one:

³⁷ 'Each sensation then relates to its sensible subject-matter; it resides in the sense organ as such, and discerns differences in the said subject-matter; e.g., vision discriminates between white and black, and taste between sweet and bitter; and similarly in all other cases. But, since we also distinguish white and sweet, and compare all objects perceived with each other, by what sense do we perceive that they differ? It must evidently be by some sense that we perceive the difference; for they are objects of sense.'

³⁸ 'Nor, again, is it possible to judge that sweet and white are different by separate senses, but both must be clearly presented to a single sense. For, in the other case, if you perceived one thing and I another, it would be obvious that they differed from each other.'

δεῖ δὲ τὸ ἐν λέγειν ὅτι ἕτερον· ἕτερον γὰρ τὸ γλυκὺ τοῦ λευκοῦ. λέγει ἄρα τὸ αὐτό, ὥστε, ὡς λέγει, οὕτω καὶ νοεῖ καὶ αἰσθάνεται³⁹. ὅτι μὲν οὖν οὐχ οἷόν τε κεχωρισμένοις κρίνειν τὰ κεχωρισμένα, δῆλον· (*De an.* III 2.426b20-23)⁴⁰

Aristotle then introduces the same proportion in an hypothetical syllogism concluding this time to the instantaneous character of the discrimination between sensibles by one sense faculty, starting from the instantaneous character of negation by the individual:

ὅτι δ' οὐδ' ἐν κεχωρισμένῳ χρόνῳ, ἐντεῦθεν. ὥσπερ γὰρ τὸ αὐτὸ λέγει ὅτι ἕτερον τὸ ἀγαθὸν καὶ τὸ κακόν, οὕτω καὶ ὅτε θάτερον λέγει ὅτι ἕτερον, καὶ θάτερον οὐ κατὰ συμβεβηκὸς τὸ ὅτε (λέγω δ', οἷον νῦν λέγω ὅτι ἕτερον, οὐ μέντοι ὅτι νῦν ἕτερον). ἀλλ' οὕτω λέγει, καὶ νῦν, καὶ ὅτι νῦν· ἅμα ἄρα. ὥστε ἀχώριστον καὶ ἐν ἀχωρίστῳ χρόνῳ. (*De an.* III 2.426b23-29)⁴¹

If, therefore, the man making the statement must pronounce it in one time, the sensitive ability must distinguish the sensibles in one time. The common sense thus appears as a unifying principle of sense knowledge.

³⁹ 'Dicit autem 'intelligit et sentit', quia nondum ostensum est quod aliud sit intellectus a sensu' (Aquinas, *In de Anima*, III 3#604). Aquinas' reflections here support what we said earlier concerning the way Aristotle speaks about the accidental relationship of a hypothetical sixth sense (namely, the intelligence) to the common sensibles.

⁴⁰ 'That which asserts the difference must be one; for sweet differs from white. It is the same faculty, then, that asserts this; hence as it asserts, so it thinks and perceives. Evidently, therefore, it is impossible to pass judgement on separate objects by separate faculties'. 'Sicut igitur oportet quod unus homo qui dicit alterum esse album a dulci sit qui cognoscit utrumque, ita oportet quod una potencia sit qua cognoscatur utrumque' (Aquinas, *In de Anima*, III 3#604).

⁴¹ 'and it is also obvious from the following considerations that they are not judged at separate times. For just as the same faculty declares that good and evil are different, so also when it declares that one is different and the other different, the "time when" is not merely incidental (as, when, e.g., I now say that there is a difference, but do not say that there is now a difference). The faculty says now, and also that the difference is now; hence both are different at once. So the judging sense must be undivided and also must judge without an interval.' On the unity of the statements expressing the differences, and also the likenesses, see Aquinas, Ia q. 85 a.3 obj.4: 'Praeterea, non potest cognosci differentia unius ad alterum, nisi simul utrumque apprehendatur, ut dicitur in libro *de Anima*: et eadem ratio est de quacumque alia comparatione. Sed intellectus noster cognoscit differentiam et comparationem unius ad alterum. Ergo cognoscit multa simul. (...) Ad quantum dicendum quod quando intellectus intelligit differentiam et comparationem unius ad alterum, cognoscit utrumque differentium et comparatorum sub ratione ipsius comparationis vel differentiae; sicut dictum est quod cognoscit partes sub ratione totius.'

But here is an objection (*De an.* III 2.426b29). The qualities which are the objects of judgement, impress upon the common sense, which has been defined as indivisible, different movements. Now, it is impossible that the same indivisible thing should be moved simultaneously by contrary movements in an indivisible time. Aristotle, starting with a likeness of proportion between the common sense and a geometrical point, then explains how an ability one in number can perceive the contrary objects of diverse senses:⁴²

ἀλλ' ὡσπερ ἦν καλοῦσι τινες στιγμῆν, ἧ μία καὶ ἧ δύο, ταύτη <καὶ ἀδιαίρετος> καὶ διαιρετή. ἧ μὲν οὖν ἀδιαίρετον, ἐν τῷ κρίνον ἐστι καὶ ἅμα, ἧ δὲ διαιρετὸν ὑπάρχει, δις τῷ αὐτῷ χρῆται σημείῳ ἅμα· ἧ μὲν οὖν δις χρῆται τῷ πέρατι, δύο κρίνει, καὶ [κεχωρισμένα] ἔστιν ὡς κεχωρισμένως· ἧ δὲ ἐνί, ἐν καὶ ἅμα. (*De an.* III 2.427a9-14).⁴³

The geometrical point is indivisible or divisible according as it is taken in itself as single or as double. For one can consider it as the start or end of a segment, or as the beginning of one and the end of another segment of a line. Thus, as indivisible, both the point and the judgment (τὸ κρίνον) are common principles and terms; they assure the continuity and the unity of their correlative, namely lines and the five senses. The common sense is, indeed, the root from which the sensitive ability is communicated to all the organs and at which terminate all their changes, and there must be one judgment when it compares two sensibles perceived by it in the same subject. But insofar as it is the principle and term of these two sensations, it is divisible.

42 'Ponit veram solutionem; et solutio ista sumitur ex similitudine puncti' (Aquinas, *In de Anima*, III 3#609). See Hamlyn 1993, 128: 'Aristotle claims here to give the final solution to his problem. That which judges or discriminates, the unified sense (presumably the αἰσθητικὸν πάντων—that which can perceive all things—of the *De Sensu* 449a18 and the κοινὴ δύναμις—the common potentiality—of *De Somno* 455a16), is like a point. This is a single thing but qua forming a boundary between two sections of a line it can be treated as the starting-point of two lines, and hence as itself two. So far this is a mere analogy to illustrate the notion of being numerically one but divided in function.'

43 'But it is like what some call a point, which is <both indivisible> and divisible in so far as it is one and two. That which judges, therefore, is one and judges at one time in so far as it is indivisible, but in so far as it is divisible it simultaneously uses the same point twice. In so far then as it uses the boundary-point twice it judges two separate things in a way separately; in so far as it uses it as one it judges one thing and at one time.' Hamlyn translation. See also *Sens.* 7.449a10-13: Ἄρ' οὖν ἧ μὲν ἀδιαίρετόν ἐστι κατ' ἐνέργειαν, ἐν τί ἐστι τὸ αἰσθητικὸν γλυκέος καὶ λευκοῦ, ὅταν δὲ διαιρετὸν γένηται κατ' ἐνέργειαν, ἕτερον.

It can therefore be considered in one way as principle and term of all the sensations that it compares and, in another way, as principle and term of this sense and of that other sense.⁴⁴

After having shown that the perception of the operations of the senses pertain to the five senses themselves, and that the discernment between the diverse sensibles pertain to a sense faculty, but one which is common, Aristotle is ready to bring up the opinion that thought also pertains to the sensitive faculty, which amounts to saying that sense and intellect are the same, an opinion that Aristotle attributes to Empedocles and Homer, but that Democritus and Parmenides (and perhaps even Anaxagoras) also shared:

Ἐπεὶ δὲ δύο διαφοράς ὀφίονται μάλιστα τὴν ψυχῆν, κινήσει τὴν κατὰ τόπον καὶ τὴν νοεῖν⁴⁵ καὶ τὴν κρῖναι καὶ ἀισθάνεσθαι, δοκεῖ δὲ καὶ τὸ νοεῖν καὶ τὸ φρονεῖν⁴⁶ ὡς τὸ αἰσθάνεσθαι τὴν εἶναι. (ἐν ἀμφοτέροις γὰρ τούτοις κρῖναι τὴν ψυχὴν καὶ γινώσκειν τὸν ὄντων), καὶ οἱ γὰρ ἀρχαῖοι τὸ φρονεῖν καὶ τὸ αἰσθάνεσθαι ταυτὸν εἶναι φασί, ὡς τὸν καὶ Ἐμπεδοκλῆς εἶρηκε, πρὸς πᾶσιν γὰρ μῆτις αὐτέτα ἀνθρώποις καὶ ἐν ἀλλοῖς ὄσεν φρονεῖν αἰεὶ καὶ τὸ φρονεῖν ἀλλοῖα παρῖσταται.⁴⁷

⁴⁴ See Aquinas, *In de Anima*, III 3#609-610. See also *In de Sensu et Sensato*, 19#288: 'ostendit quomodo eadem pars anime indivisibilis possit simul sentire diversa, et assignat duos modos. Quorum primum breviter et obscure ponit, quia in libro De anima apertius positus est. Ad huius ergo evidentiam considerandum est quod, cum operationes sensuum propriorum referantur ad sensum commune sicut ad primum et commune principium, hoc modo se habet sensus communis ad sensus proprios et operationes eorum sicut unum punctum ad diversas lineas que in ipsum concurrunt. Punctum autem quod est terminus diversarum linearum, secundum quod in se consideratur, est unum et indivisibile; et hoc modo sensus communis, secundum quod est in se indivisibilis, est unum sensitivum actu dulcis et albi, dulcis per gustum et albi per visum. Si vero consideretur punctum seorsum ut est terminus huius linee et seorsum ut est terminus alterius linee, sic est quodam modo divisibile, quia unum puncto ut duobus; et similiter sensus communis, quando accipitur ut divisibile quiddam, puta cum seorsum indicat de albo et seorsum de dulci, est alterum secundum actum. Secundum vero quod est unum, indicat differentias sensibillum.' Aquinas, in his commentary on the passages from the *De Sensu*, adds to what he said about Aristotle's solution in the *De Anima* and which is found again in the *De Sensu*. See *In de Sensu et Sensato* 19#291. One finds these two solutions in Maurus, *In De an.* 82#9.

⁴⁵ Here the verb νοεῖν has the general meaning of 'thinking' and includes φρονεῖν, ἐπινοεῖν and βόεα.

⁴⁶ The verb φρονεῖν, used in the course of the chapter, has a more precise sense. In the strict Aristotelian sense φρονεῖν means prudence or foresight, that is, practical reason proper to man and applied to obtaining the good; nonetheless, in the present context this cannot be its meaning and it would be best to interpret it as intelligence in general.

⁴⁷ Empedocles had thought depend on the dispositions of the body.

τὸ δ' αὐτὸ τούτοις βούλεται καὶ τὸ Ὀμήρου τοῖος γὰρ νόος ἐστίν'⁴⁸ (*De an.* III 3.427a17-26)⁴⁹

The aspect of judgment in the instrumental act is beautifully illustrated here: Aristotle takes up the opinion of a person reputed to be wise, as well as consulting the writings of a poet,⁵⁰ two sources of probable premises mentioned in chapter fourteen of the *Topics*. Furthermore, the opinion reported follows another opinion whose formation depends on the use of the third tool in view of defining, such as described in chapter sixteen of the *Topics*. The differences between the living and the non-living, discovered in view of defining the soul are involved, in fact. Aristotle first introduced this opinion in Book One, uniting sense and intellect under the name αἰσθάνεσθαι:

τὸ ἔμψυχον δὴ τοῦ ἀψύχου δυοῖν μάλιστα διαφέρειν δοκεῖ, κινήσει τε καὶ τῷ αἰσθάνεσθαι. (*De an.* I 2.403b25-27)⁵¹

For in both cases the soul judges and has cognizance of something which is: an application of the fourth tool by Aristotle's predecessors.⁵² (Whence one can see that Aristotle can be called

⁴⁸ *Odysseus* XVIII, 136.

⁴⁹ 'Now there are two special characteristics which distinguish soul, viz., (1) movement in space, and (2) thinking, judging and perceiving. Understanding and thinking is regarded as a form of perceiving; for in both cases the soul judges and has cognizance of something which is. Indeed the older philosophers assert that thinking and perceiving are identical. For instance Empedocles has said "Understanding grows with a man according to what appears to him," and in another passage "whence it befalls them ever to think different thoughts." Homer's phrase, again, "Such is the nature of man's mind" implies the same thing.' Hett translation, slightly modified. See *Metaph.* IV 5.1009b12-a10.

⁵⁰ Here a passage from the *Odysseus* (XVIII, 136) is being referred to that any educated Greek (or reader of Homer) could reconstruct from memory: 'For such is indeed the thought of men upon the earth, that which each day the Father of men and gods suggests to them.' Aristotle interprets it as though for Homer the material circumstances of the weather each day, and of which Zeus is the master, conditioned human thought.

⁵¹ 'There are two qualities in which that which has a soul seems to differ radically from that which has not; these are movement and sensation.'

⁵² Let us note also that Aristotle must spend some time on the likenesses to be found in the sayings of the Ancients in order to be able to determine that they were identifying sense and intellect. Schofield's 1992, 271-272 remark could well have served as an introduction for us to this section: 'It is instructive to notice what occasions Aristotle's introduction of the topic of phantasia in *DA* 3. [We will be able to appreciate the pertinence of this affirmation a bit later.] By the beginning of that chapter he has completed his account of sense perception, and he now turns to consider thinking, reminding us of what his investigation of the opinions of his philosophical predecessors in I.2 had revealed (...) The fact that both in thought and in perception the soul judges and is acquainted with things are led [sic] the Ancients, Aristotle tells us, to identify the two faculties. And so in his attempt to determine the nature of thinking he takes for his first task the demonstration that this identification is a mistake.'

the father of the tools only as he is called the father of logic. That is to say, insofar as he formulated the methods that allow us to perfect reason's natural abilities, and in no way insofar as he invented rules, whichever they are, or because he is the first to use these abilities.) Now, the Ancients tripped on the likeness between sense and intelligence and omitted or failed to use the third tool. But since Aristotle, as we will see, realized that sense and intellect are abilities of a different kind, and since it is not insofar as they belong however to a common genus that this resemblance belongs to them, the likeness noted and seemingly approved by him here is a proportion. The sense is to the sensibles as the intellect to the intelligibles: the two *judge* or *know*, in their way, their respective objects. This is, moreover, quite close to the first example of proportions that Aristotle gives in chapter seventeen of the *Topics*: 'As science is related to the object of science, so is sensation related to the object of sensation' (*Top.* I 17.108a9-10).

The cause of the formation of the opinion that sense and intellect are the same is thus, according to Aristotle, an error as to a difference: the Ancients believed that the intellect was corporeal, like sense, and that thinking, like sensing, depended on a contact between the object and a corporeal part similar to it:

πάντες γὰρ οὗτοι τὸ νοεῖν σωματικὸν ὥσπερ τὸ αἰσθάνεσθαι ὑπολαμβάνουσιν, καὶ αἰσθάνεσθαί τε καὶ φρονεῖν τῷ ὁμοίῳ τὸ ὅμοιον, ὥσπερ καὶ ἐν τοῖς κατ' ἀρχὰς λόγοις διωρίσαμεν. (*De an.* III 3.427a26-29)⁵³

Thus, it is the meanings of the word 'knowledge', along with the realities it designates, namely the processes of sensation and thinking, which are not considered as distinct, as they should be. This opinion, as we said, is based on a likeness between the objects included by one of the differences defining the soul: both thinking and sensation consist in a knowledge and a judgment of the soul. Albert shows clearly that the identification of sense with intellect is motivated by a likeness and he formulates the argument, naturally, concluding from two affirmative premises: sense and intellect have the same attribute:

⁵³ 'For all these authors suppose the process of thinking to be a bodily function like perceiving, and that men both perceive and recognize like by like, as we have explained at the beginning of this treatise.' See also *De an.* I 2; 5.409b26. This is a question of things manifestly alike between which one does not see a difference, as was also the case for the knowing faculty and its object. Moreover, here as there, a more sophisticated error consists in discovering differences without simultaneously using the fourth tool, such that one ends up thinking that these things are quite other. In this case, one ends up creating a radical dichotomy between sensible knowledge and intellectual knowledge. Plato, for example, since he insisted, in the name of its necessary stability, that intellectual knowledge could not be about sensible things, was forced to posit a world of ideas and to deny that intellectual knowledge had its roots in sensible knowledge.

syllogizabant hoc ex duabus affirmativis in secunda figura dicentes, quod sensui interiori convenit iudicare et discernere aliquid entium, cuius forma est apud ipsum, et intellectui convenit idem, ergo intelligere est quoddam sentire. (Albert, *In De an.* 170)

Following him, Aquinas shows clearly that this erroneous identification caused by a likeness is due to the lack of using the third tool. The temptation is all the stronger, since there really is a likeness between the two:

ostendit causam predictae positionis. Manifestum est autem quod, remota differentia qua aliqua ad invicem differunt, remanent idem; sicut si rationale auferatur ab homine remanebit de numero irrationabilium animalium; hec autem est differentia qua differt cognitio intellectiva a sensitiva quod sentire est aliquid corporeum (non enim operatio sensus est sine organo corporali), intelligere autem non est aliquid corporeum (quia operatio intellectus non est per organum corporeum, ut infra ostendetur). Ideo ergo Antiqui ponebant sensum et intellectum idem, quia opinantur quod intelligere esset aliquid corporeum sicut et sentire; quomodo autem utrumque ponerent aliquid corporeum, ostendit per hoc quod ponebant tam sapere secundum intellectum quam sentire contingere per uirtutem similitudinis, sicut in primo libro dictum est, et intelligebant similitudinem secundum esse corporeum, puta quod per terram cognoscitur terra et per aquam aqua et sic de aliis, unde sequebatur quod sentire et intelligere consequerentur naturam corpoream et eodem modo; et sic sentire et intelligere sequitur idem esse. (Aquinas, *In de Anima*, III 4#622-23)

The structure of Hamlyn's commentary describing the reflections of the Ancients also follows these steps of likeness-difference, and shows as well that the error does not consist in the discovery of likenesses—Aristotle indeed takes some of these on his own account—but in failing to take account of the differences:

Aristotle begins to differentiate perception from thinking. Despite his comments on his predecessors (e.g. Parmenides, Empedocles, and Democritus), who tended to assimilate perception to thinking, assuming that they were both forms of like being affected by like and treating them both from a physical point of view, Aristotle's own accounts of perception and thought are remarkably parallel. They both involve the assimilation of the faculty to its object, the reception of form without matter, incorrigibility in relation to certain objects, and a reliance upon judgment. The only difference is that since the intellect has no specific organ the first two of these notions cannot be interpreted, as in the case of sense-perception, in terms of an organ, as a physical or physiological doctrine. (Hamlyn 1993, 129)

καίτοι ἔδει ἅμα καὶ περὶ τοῦ ἠπατῆσθαι αὐτοὺς λέγειν· οἰκειότερον γὰρ τοῖς ζώοις, καὶ πλείω χρόνον ἐν τούτῳ διατελεῖ ἡ ψυχὴ. διὸ ἀνάγκη ἦτοι ὥσπερ ἔνιοι λέγουσι, πάντα τὰ φαινόμενα εἶναι ἀληθῆ, ἢ τὴν τοῦ ἀνομοίου

θίξειν ἀπάτην εἶναι· τοῦτο γὰρ ἐναντίον τῷ τῷ ὁμοίῳ τὸ ὅμοιον γνῶρίζειν· (*De an.* III 3.427a29-b5)⁵⁴

Aristotle, without yet affirming that sense and intellect differ, deduces the absurd consequences which follow from considering the intellect as corporeal. One must indeed attribute a cause to error, which is an evident fact. Now, if the intellect knew by its own likeness to a corporeal object, error would not exist⁵⁵ because knowing would then be something natural: the soul being made up of the elements, it would not only be in ability to its objects, but also in act—a possibility whose absurdity was shown by Aristotle in the *Metaphysics*.⁵⁶ Or, according to the other possibility, error would consist in the contact with the unlike, since to know is seemingly contact with the like.

δοκεῖ δὲ καὶ ἡ ἀπάτη καὶ ἡ ἐπιστήμη τῶν ἐναντίων ἡ αὐτῇ εἶναι. (*De an.* III 3.427b5-6)⁵⁷

Aristotle reduces this position through an argument that one may qualify as dialectical, because drawn from opinion. Let us suppose that error has for its object the unlike rather than the like; on the other hand, it is probable that since error and science bear on contraries, both error and science will bear on both the like and the unlike; it would then follow that that which has for its object the contraries like-unlike would bear on the unlike exclusively.⁵⁸ Indeed, we have the same relation to the contraries in knowledge of the truth and in error, because whoever knows one of the contraries also knows the other, and he who errs as to one of them, errs as to the other also.

⁵⁴ 'And yet they ought to have made some mention of error at the same time; for error seems to be more natural to living creatures, and the soul spends more time in it. From this belief it must follow either that, as some say, all appearances are true, or that error is contact with the unlike; for this is the opposite to recognizing like by like.'

⁵⁵ See *De an.* I 2.404a28 versus Democritus and Aquinas, *In de Anima*, I 3#39.

⁵⁶ See *Metaph.* IV 5.1009a6 versus Protagoras. Also Maurus, *In De an.* 83#4: 'Huic argumento dupliciter potest responderi. Primo dici potest, quod non datur deceptio, sed omnia, quae videntur atque apparent, sunt vera. Sed haec responsio rejecta est lib. IV *Metaphysic*, ideoque nihil addendum est hoc loco.' It is evident from our own experience that we know in ability before knowing in act.

⁵⁷ 'But it appears that in the case of contraries error, like *science*, is one and the same'.

⁵⁸ Plato also has something like this when he makes knowledge bear on being, opinion on becoming, and error on non-being. See *Resp.* VII 534a, and *Soph.* 240c-d.

Now, that science has for its object contraries is one of the examples of probable propositions given in the *Topics*.⁵⁹ Furthermore, Aristotle seems here to be following a rule which he laid out there concerning taking probable propositions:

Propositions must always be taken in their most universal form, and the one should be made into many; for example, "The knowledge of opposites is the same," then "The knowledge of contraries is the same," and finally, "The knowledge of relative terms is the same." In the same way, those too must be divided again, as long as division is possible, for example, "the knowledge of good and evil", of black and white," and "of cold and hot is the same"; and so with the other cases. (*Top.* I 14.105b33-35)

Thus, if it is probable that the same knowledge bears upon contraries, it is probable that it will be the same knowledge which bears on the like and the unlike.

Aristotle now attacks the position:

ὅτι μὲν οὖν οὐ ταύτόν ἐστι τὸ αἰσθάνεσθαι καὶ τὸ φρονεῖν⁶⁰, φανερόν· τοῦ μὲν γὰρ πᾶσι μέτεστι, τοῦ δὲ ὀλίγοις τῶν ζώων. (*De an.* III 3.427b6-8)⁶¹

Nor again is perceiving the same thing as thinking. Indeed, the perception of proper objects is always true, but it is possible to think falsely. And because one might object that to think correctly is the same as to sense, Aristotle adds that perception belongs to all animals, whereas thought does not, but only to rational beings:

ἀλλ' οὐδὲ τὸ νοεῖν, ἐν ᾧ ἐστὶ τὸ ὀρθῶς καὶ τὸ μὴ ὀρθῶς, τὸ μὲν ὀρθῶς φρόνησις καὶ ἐπιστήμη καὶ δόξα ἀληθῆς, τὸ δὲ μὴ ὀρθῶς τᾶναντία τούτων· οὐδὲ τοῦτο ἐστὶ ταῦτο τῷ αἰσθάνεσθαι· ἢ μὲν γὰρ αἴσθησις τῶν ἰδίων ἀεὶ ἀληθῆς, καὶ πᾶσιν ὑπάρχει τοῖς ζώοις,

⁵⁹ *Top.* I 10.104a15; 14.105b5

⁶⁰ One might think that φρονεῖν is being used here to designate the intellectual operations in general. But it seems one must rather take it in its proper sense. See Aquinas, *In de Anima*, III 4#629: 'Dicit autem quod sapere inest paucis animalium, et non quod insit solis hominibus, quia etiam quedam animalia participant aliquid prudentie et alicuius sapiencie, scilicet quod recte iudicant de agendis per aestimationem naturalem.' It seems on the contrary that νοεῖν (in the following quote) should be taken in its general sense.

⁶¹ 'Now it is quite clear that perceiving and practical thinking are not the same; for all *animals* have a share in the former, but only a few in the latter.'

διανοεῖσθαι δ' ἐνδέχεται καὶ ψευδῶς, καὶ οὐδενὶ
ὑπάρχει ᾧ μὴ καὶ λόγος· (*De an.* III 3.427b8-14)⁶²

Indeed, as we shall see, what these animals without reason have which is not an external sense and which can be true or false is only imagination, not intellect.

Clearly, Aristotle is using two differences between the sense and the intellect—they do not have the same relation to the truth and they do not belong to the same subjects—in order to establish that they are not identical. Now, this is one of the particular uses of the third tool mentioned in the *Topics* (I 18.108a35-b4).

Introducing the imagination by which most animals seem, in fact, to go beyond the external senses, Aristotle now proposes a distinction between it and the intellect which these other animals do not in fact have:

[διανοεῖσθαι δ' ἐνδέχεται καὶ ψευδῶς,] καὶ οὐδενὶ
ὑπάρχει ᾧ μὴ καὶ λόγος· φαντασία γὰρ ἕτερον καὶ
αἰσθήσεως καὶ διανοίας· (*De an.* III 3.427b13-15)⁶³

Thus, after having brought out the likeness and the differences between the sense and the intellect, he first shows how they are tied together, in the case of man, by the imagination:

[φαντασία γὰρ ἕτερον καὶ αἰσθήσεως καὶ διανοίας·]
αὐτὴ τε οὐ γίνεται ἄνευ αἰσθήσεως, καὶ ἄνευ ταύτης
οὐκ ἔστιν ὑπόληψις. (*De an.* III 3.427b14-16)⁶⁴

⁶² 'Nor again is thinking, in which one can be right and wrong, right thinking being understanding, knowledge, and true belief, wrong the opposite of these—nor is this the same as perceiving. For the perception of the special-objects is always true and is found in all animals, whereas it is possible to think falsely also, and thinking is found in no animal in which there is not also reason.' Hamlyn translation

⁶³ 'thought belongs to no animal which has not reasoning power; for imagination is different from both perception and thought'. Concerning this γὰρ, which is difficult to explain: Rodier, following Simplicius (*In De an.*, 205.16), attaches this sentence to the preceding one, and he thus understands it to read: thought does only belong to rational beings; indeed, imagination, which belongs to animals, is not thought: 'La liaison de cette remarque avec ce qui précède est assez claire: la pensée n'appartient qu'aux êtres doués de raison; car l'imagination qui appartient à certains animaux n'est pas la pensée' (Rodier 1900, 403). See Schofield 1992, 272: 'He [Aristotle] observes that all animals have sense-perception, but not all think; and he moves immediately to forestall a possible counter-argument based on the idea that animals do think in a way, because they have phantasia, which is also a sort of perception. The equation cannot be thus circuitously reinstated. Phantasia (which, Aristotle agrees, nearly all animals do have) is different both from sense-perception and from thinking'.

⁶⁴ 'imagining always implies perceiving, and is itself implied by judgement.' Given the introduction of the word ὑπόληψις, which designates an act and even an object, it seems to me preferable to take

Thus, the external senses and intellect differ also from one another by their relation to this other reality, which is the imagination: the one comes necessarily before, and the other, on the contrary, presupposes it.⁶⁵ Now, two things which have a different relation to a third necessarily differ from this third.

αἴσθησις as Maurus does, to be the act or even the object rather than the faculty. ('sicut operatio phantasiae non fit, nisi praecesserit operatio sensus, ita opinio, quae est operatio intellectus, non fit, nisi praecesserit aliqua operatio phantasiae, ut melius patebit inferius' (Maurus, *In De an.* 84#1).) As for φαντασία, it also seems better to me not to understand it as the faculty. Besides, as Aquinas explains a bit further on (*In de Anima*, III 6.#667), it is not yet clear for Aristotle if it is the act of sense or of some distinct power. Maurus does not take account of this and is perhaps a bit too precise here. Moreover, one sees in reading *De an.* III 3.427b24-26 that it is better to take ὑπόληψις, as Hett does, in a broad sense, since Aristotle is dividing it there into ἐπιστήμη, δόξα and φρόνησις: εἰσὶ δὲ καὶ αὐτῆς τῆς ὑπολήψεως διαφοραί, ἐπιστήμη καὶ δόξα καὶ φρόνησις καὶ τάναντία τούτων, περὶ ὧν τῆς διαφορᾶς ἕτερος ἔστω λόγος. 'Addit Aristoteles primo, species existimationis esse scientiam, opinionem, prudentiam et his contraria, de quibus actum est lib. VI Ethicorum' (Maurus, *In De an.* 85#4). Hamlyn 1993, 130 translates 'supposal'. Tricot 1990, 165n3 translates ὑπόληψις by 'croyance' and comments: 'L'ὑπόληψις est la croyance, le jugement présentant un caractère d'universalité. C'est l'acte de l'intellect discursif (...) L'ὑπόληψις est le résultat de la dianoia, et elle inclut ici, comme genre, l'ἐπιστήμη, la δόξα et la φρόνησις.' Jannone, Rodier and Bodéüs also translate 'croyance': 'Le terme croyance embrasse génériquement toute espèce de pensée, vraie ou fausse, particulière ou générale, que l'on peut spécifier, au besoin, comme simple opinion ou comme science' (Bodéüs 1993, 215n3). See Aristotle, *Ph.* V 4.227b13: ἡ ἐπιστήμη εἶδος μὲν ὑπολήψις.

⁶⁵ Simplicius remarks that judgment and sensation are, in respect to imagination: τὸ μὲν ὡς τέλος, τὸ δὲ ὡς οὐκ ἄνευ (*In De an.* 206.3).

Aristotle then compares imagining to what has the same relation to understanding that it has to sensing, namely, judgment.⁶⁶ Imagining depends on us, since we can form images according to our free choice. Whereas, on the contrary, the formation of a judgment depends on the reality it bears upon:

ὅτι δ' οὐκ ἔστιν ἡ αὐτὴ [νόησις] καὶ ὑπόληψις, φανερόν.
 τοῦτο μὲν γὰρ τὸ πάθος ἐφ' ἡμῖν ἐστίν, ὅταν
 βουλώμεθα (πρὸ ὀμμάτων γὰρ ἔστι ποιήσασθαι, ὡσπερ
 οἱ ἐν τοῖς μνημονικοῖς τιθέμενοι καὶ εἰδωλοποιοῦντες),
 δοξάζειν⁶⁷ δ' οὐκ ἐφ' ἡμῖν· ἀνάγκη γὰρ ἢ ψεύδεσθαι ἢ
 ἀληθεύειν. (*De an.* III 3.427b16-21)⁶⁸

Furthermore, judgment is always followed by a passion in the appetite, whereas image is not (*De an.* III, 3, 427b21-24). Aquinas explains that to have a passion requires seeing the object as good or bad, and this requires either the intellectual operation of composing and dividing, such as found in opinion, or the natural instinct found in animals (the estimative power). Since imagination neither composes or divides as such, it does not give rise to passions. The two arguments furnished depend on the third tool: having found two differences, one can conclude that to imagine and to judge are not identical. This is clearly a case of the use of the tool in view of the problem of the same and the other.⁶⁹

Now, both to imagine and to judge, although shown not to be the same, seem nonetheless to pertain to understanding, first, because judgment is the result of the act of composition or division by the intellect, which always presupposes images, and secondly, since imagining, which presents us with these, is assimilated to the acts by which we discern and judge the true and the false:

⁶⁶ It is perhaps useful to point out here how natural it is to confuse imagining with thinking. Our everyday vocabulary reflects this well: we often use interchangeably, 'I imagine that is so' and 'I think that is so'. The modern Empiricists use 'idea' to mean either thought or image.

⁶⁷ Here and in 427b21, δόξα is taken in a broader sense than further on (b25), as a synonym of ὑπόληψις. In b25, it designates a particular form of ὑπόληψις.

⁶⁸ 'But clearly image and judgement are different modes of thought. For the former is an affection which lies in our power whenever we choose (for it is possible to call up mental pictures, as those do who employ images in arranging their ideas under a mnemonic system), but it is not in our power to form opinions as we will; for we must either hold a false opinion or a true one.'

⁶⁹ 'Quod autem intelligentia et opinio non sint eadem imaginationi, de qua diximus, manifestum est ex his quae dicuntur nunc' (Albert, *In De an.* 171). 'Aristotle's way of distinguishing between imagining and supposing' (Hamlyn 1993, 130).

Περὶ δὲ τοῦ νοεῖν, ἐπεὶ ἕτερον τοῦ αἰσθάνεσθαι, τούτου δὲ τὸ μὲν φαντασία δοκεῖ εἶναι τὸ δὲ ὑπόληψις, περὶ φαντασίας διορίσαντας οὕτω περὶ θατέρου λεκτέον. (*De an.* III, 3, 427b27-29)⁷⁰

Before being able to look at its characteristic act, and then at the intellect itself, it will be necessary to clarify what the imagination is. Thus, Aristotle is going to show what he affirmed before, namely, that the imagination is not sensation. He will then set out once again to establish that to imagine cannot be to judge, but this time by the fact that the faculty to imagine cannot be identified with any species of the faculty to judge: neither the understanding of principles, nor science, nor opinion.

εἰ δὴ ἐστὶν ἡ φαντασία καθ' ἣν λέγομεν φάντασμα τι ἡμῖν γίνεσθαι καὶ μὴ εἶ τι κατὰ μεταφορὰν λέγομεν, μία τίς ἐστὶ τούτων δύναμις ἢ ἕξις, καθ' ἣν κρίνομεν καὶ ἀληθεύομεν ἢ ψευδόμεθα. τοιαῦται δ' εἰσὶν αἰσθησις, δόξα, ἐπιστήμη, νοῦς. (*De an.* III 3.428a1-5)⁷¹

Once again, then, we are facing problems of the same and the other whose resolution goes through the discovery of differences, aided by the third tool, which ultimately aims at

⁷⁰ 'As for thought, since it is distinct from perception, and is held to comprise imagining and judgement, it will be best to discuss it after having completed our analysis of imagination.'

⁷¹ 'If imagination is (apart from any metaphorical sense of the word) the process by which we say that an image is presented to us, it is one of those faculties or states of mind by which we judge and are either right or wrong. Such are sensation, opinion, science and understanding of principles.' Albert, leaving aside other abilities by which the true and false are affirmed but which are less like the imagination than the four enumerated by Aristotle, accentuates the idea that it is in respect to thi'gs that are quite close together than one must seek out differences: "oportet, quod phantasia potentia sit habitualis, secundum quam contingit verum dicere de re ipsa. Hae autem potentiae, quamvis multae sint, tamen ad praesens sufficiunt quattuor, quae sunt sensus communis, opinio, scientia et intellectus. Ars enim et prudentia, quae sunt etiam virtutes intellectuales, similiter autem et sapientia, secundum quas contingit verum dicere, nihil similitudinis habent cum phantasia, quia sapientia de altissimis et primis et divinis est, quae non habent imagines, ars autem est principium factivum cum ratione dirigente factionem et facturam, prudentia autem est principium activum cum ratione et dirigit in operabilibus per nos, imaginatio autem nihil omnino dirigit, sed potius impedit omnem directionem, sicut supra ostendimus' (*In De an.* 172). According to Alexander, imagination in the metaphorical sense designates indifferently all the cognitive faculties. Aristotle, therefore, wanted to say, it seems, that if we do not take this term in the metaphorical sense, imagination is not one of these faculties or habits. See Alexander, *In De an.* 66.19-24.

definition.⁷² When commenting on Aristotle's arguments, Alexander uses some expressions that make us think of the third tool (χωρίζειν), and which resemble very much the expressions used by Aristotle to speak about the problems of the same and the other:

τῆς μὲν οὖν αἰσθήσεως χωρίζεται ἡ τοιαύτη φαντασία τῷ τὴν μὲν αἴσθησιν παρόντων εἶναι τῶν αἰσθητῶν, φαντασίαν δὲ γίνεσθαι καὶ μὴ παρόντων (...) ὅτι δὲ μὴ ταύτῳ αἴσθησις καὶ φαντασία, δῆλον καὶ ἐκ τοῦ (...) ἀλλὰ μὲν οὐδὲ ἐπιστήμη οὐδὲ νῶ ταύτῳ ἢ φαντασία (...) δόξαι δ' ἂν κατὰ τὸ ἀληθὲς καὶ ψευδὲς γίνεσθαι φαντασία ἢ αὐτὴ εἶναι τῇ δόξει. καὶ γὰρ τῶν δοξῶν αἱ μὲν ἀληθεῖς εἰσιν, αἱ δὲ ψευδεῖς. οὐ μὲν οὐδὲ οὕτως ἔχει. (Alexander, *In De an.* 66.24-67.15)

Τὸ δὲ τὰς διαφορὰς εὐρεῖν χρήσιμον πρὸς τε τοὺς συλλογισμοὺς τοὺς περὶ ταύτου καὶ ἑτέρου (...) εὐροντες γὰρ διαφορὰν τῶν προκειμένων ὅποιοι οὖν δεδειχότες ἐσόμεθα ὅτι οὐ ταύτῳ, remarks Aristotle (*Top.* I 18.108a37-b4). Albert and Aquinas and Maurus are equally very clear that it is a question of showing that imagination is not sensation, nor science, nor understanding of principles, nor opinion.⁷³

Let us note in passing the use of the second tool to put aside a metaphorical sense of the word 'imagination' which could be applied to fabulous beings and creations of the mind, as well as to the objects of all the cognitive faculties. Alexander, in the following passage, uses metaphorical only for the second:

οὐ μὲν τούτων ἐστὶ τινὶ ἢ φαντασία ἢ αὐτὴ, εἰ τὴν ἰδίως τις καὶ κυρίως λεγομένην φαντασίαν λέγοι. δὲ ἐστὶ κίνησις τις, καθ' ἣν λέγομεν φάντασμα τι ἡμῖν ἐν τῇ ψυχῇ γίνεσθαι, ἐπεὶ κατὰ μεταφορὰν γε κατὰ πάντων τῶν προερημένων τῇ φαντασίᾳ χρώμεθα πολλάκις. καὶ γὰρ κατὰ αἰσθήσεως καὶ κατὰ δόξης καὶ

⁷² See *De an.* III 3.428a1-b9: ὅτι μὲν οὖν οὐκ ἔστιν αἴσθησις, δῆλον ἐκ τῶνδε (...) ἀλλὰ μὲν οὐδὲ τῶν ἀεὶ ἀληθευόντων οὐδεμία ἔσται, οἷον ἐπιστήμη ἢ νοῦς (...) φανερόν τοίνυν ὅτι οὐδὲ δόξα μετ' αἰσθήσεως, οὐδὲ δι' αἰσθήσεως, οὐδὲ συμπλοκὴ δόξης καὶ αἰσθήσεως φαντασία ἂν εἴη (...) οὕτ' ἄρα ἔν τι τούτων ἐστὶν οὕτ' ἐκ τούτων ἢ φαντασία.

⁷³ See Albert, *In De an.* 172, 174; Aquinas, *In de Anima*, III 5#638, #654; Maurus, *In De an.* 85#5, 87 #10.

κατὰ ἐπιστήμης καὶ νοῦ τὴν φαντασίαν κατηγοροῦμεν.
(*In De an.* 66.19-24)⁷⁴

Aquinas has some interesting remarks on the judgement involved by the use of the tools in regard to the identification of the four faculties that involve the true and the false.⁷⁵ These are, indeed, the four kinds of knowledge which were recognized at the Philosopher's time. One can see this, he says, by considering the position of Plato expounded in Book I. Indeed, it was only these four that he reduced to number, assigning the intellect to unity, science to duality, opinion to three-ness and the sense to four-ness.⁷⁶ Furthermore, one can note, as we saw that Albert did, some of the modes of apprehension given by Aristotle which are missing among those listed: wisdom, art, prudence, suspicion.

The first of Aristotle's arguments to show that the imagination is not sense, neither in act nor in ability, supposes that one has grasped that 'sense' can designate either the faculty or the operation, as Aristotle established⁷⁷:

ὅτι μὲν οὖν οὐκ ἔστιν αἴσθησις, δῆλον ἐκ τῶνδε.
αἴσθησις μὲν γὰρ ἥτοι δύναμις ἢ ἐνέργεια, οἷον ὄψις
καὶ ὄρασις, φαίνεται δέ τι καὶ μηδετέρου ὑπάρχοντος
τούτων, οἷον τὰ ἐν τοῖς ὕπνοις. (*De an.* III 3.428a5-8)⁷⁸

The person asleep, indeed, does not imagine by the sense in ability, because nothing appears to the sense when it is in ability; no more than he imagines by the sense in act, since during sleep, the sense is not in act. Four of the six arguments which follow, showing that imagination and

⁷⁴ Thus, according to Alexander, imagination in the metaphorical sense designates indifferently all the cognitive faculties. Aristotle, therefore, wanted to say, it seems, that if we do not take this term in the metaphorical sense, imagination is not one of these faculties or habits.

⁷⁵ 'Ponit autem haec quatuor quasi jam nota. Alia autem, quae ad cognitionem videntur pertinere, nondum erant suo tempore per certitudinem scita. Ipse autem jam superius distinxit intellectum a sensu. Unde praeter sensum connumerat tria alia; scilicet intellectum, opinionem et scientiam (...) Cognoscere autem possumus quod haec tantum apprehensionis principia apud antiquos nota erant, ex positione Platonis superius in primo libro posita, qui solum haec quatuor ad numeros reduxit, tribuens intellectum uni, scientiam dualitati, opinionem ternario, sensum quaternario' (*In de Anima*, III 5.#639-640). It is thus for another reason than that given by Albert that Aquinas thinks Aristotle did not distinguish imagination from wisdom, foresight and art.

⁷⁶ See *De an.* I 2.404b21-27.

⁷⁷ *De an.* II 5; III 2

⁷⁸ 'It is clear from the following considerations that imagination is not sensation. Sensation is either potential or actual, e.g., either sight or seeing, but imagination occurs when neither of these is present, as when objects are seen in dreams.'

sense are other, have as their middle term a difference between them. First of all, imagination is not sense (in ability), because imagination is not always in the animal, whereas sense in ability is always present in the animal.⁷⁹ If imagination is not possible for *all* animals as sense in act is—we'll look at that afterwards—it is evident that imagination will not *always* be present in animals, whereas sense in ability is.

Secondly, imagination does not belong to all animals, whereas sensation does.⁸⁰ Indeed, the works of foresight that one observes on the part of animals such as ants or bees are carried out thanks to a natural inclination, not because of a determinate imagination distinct from sense. Indeed, these animals can imagine nothing unless moved by a sensible object. Thus, their operating in view of an end, as though projecting into the future, does not depend upon an image they make of this future state. Rather, they imagine present acts, which are ordered to an end by inclination more than by some apprehension. As Aquinas explains it, for Aristotle these animals are here said to have imagination when something appears to them even when the sense is not in act (*In de Anima*, III 5#644). That Aristotle himself affirms later that all animals having sensation have at least some form of imagination (III 11.434a) is perhaps a sign of the dialectical character of this argument. Next, whereas the senses do not deceive us, the majority of images do not correspond to any reality, and are false.⁸¹ Finally:

ἔπειτ' οὐδὲ λέγομεν, ὅταν ἐνεργῶμεν ἀκριβῶς περὶ τὸ αἰσθητόν, ὅτι φαίνεται τοῦτο ἡμῖν ἄνθρωπος· ἀλλὰ μᾶλλον ὅταν μὴ ἐναργῶς αἰσθανώμεθα πότερον ἀληθὴς ἢ ψευδής. (*De an.* III 3.428b12-15.)⁸²

⁷⁹ εἶτα αἴσθησις μὲν ἀεὶ πάρεστι, φαντασία δ' οὐ (*De an.* III 3.428a8-9).

⁸⁰ εἰ δὲ τῇ ἐνεργείᾳ τὸ αὐτό, πᾶσιν ἂν ἐνδέχοιτο τοῖς θηρίοις φαντασίαν ὑπάρχειν· δοκεῖ δ' οὐ, οἷον μύρμηκι ἢ μελίττῃ, καὶ σκώληκι (*De an.* III 3.428a9-11). 'Aristote commence par exposer un argument destiné à montrer que l'imagination n'est ni la sensibilité en puissance, ni la sensibilité en acte; puis il en indique un second (a8: εἶτα αἴσθησις...) qui confirme le premier en ce qui concerne la sensibilité en puissance, et un troisième (a9: εἰ δὲ τῇ ἐνεργείᾳ...) qui le confirme en ce qui concerne la sensibilité en acte' (Rodier 1900, 418).

⁸¹ εἶτα αἰ μὲν ἀληθεῖς αἰεὶ, αἰ δὲ φαντασῆαι γίνονται αἰ πλείους ψευδεῖς (*De an.* III 3.428a11-12).

⁸² 'Nor do we say "I imagine that it is a man" when our sense is functioning accurately with regard to its object, but only when we do not perceive distinctly.' See Maurus, *In De an.* 85#6: 'cum perfecte et exquisite operamur per sensum, non dicimus, objectum nobis apparere tale, puta id, quod videmus, apparere hominem, sed dicimus, objectum esse tale, ex. gr. id, quod videmus, omnino esse hominem; tum vero dicimus, objectum apparere tale, cum imperfecte illud sentimus; ex gr. cum videmus hominem a longe visione confusa, tum

One might think that when Aristotle adds that we make use of the expression φαίνεται τοῦτο ἡμῖν for the sense when we are not certain of what we sense, he does so in order to make evident, by the use of the fourth tool, a likeness between two close genera—the external senses when we are not certain, and the imagination—in respect to the fact that both can deceive us.

In like manner, the arguments showing that imagination is not science, nor understanding or grasping of principles, nor opinion, also have as a middle term differences discovered thanks to the third tool:

ἀλλὰ μὲν οὐδὲ τῶν αἰεὶ ἀληθευόντων οὐδεμία ἔσται, οἷον ἐπιστήμη ἢ νοῦς· ἔστι γὰρ φαντασία καὶ ψευδής. (*De an.* III 3.428a16-18)⁸³

The image does not always adequately represent its object, whereas science and understanding of principles are always true.

λείπεται ἄρα ἰδεῖν εἰ δόξα· γίνεται γὰρ δόξα καὶ ἀληθὴς καὶ ψευδής. (*De an.* III 3.428a18-19)⁸⁴

...as is also the case for the imagination, one might add. This is, indeed, the most plausible hypothesis because of that likeness:

δόξαι δ' ἂν κατὰ τὸ ἀληθὴς καὶ ψευδὴς γίνεσθαι φαντασία ἢ αὐτὴ εἶναι τῇ δόξῃ. καὶ γὰρ τῶν δοξῶν αἱ μὲν ἀληθεῖς εἰσιν, αἱ δὲ ψευδεῖς. (*Alexander, In De an.* 67.12-14)⁸⁵

But every opinion is accompanied by belief or persuasion:

ἀλλὰ δόξη μὲν ἔπεται πίστις (οὐκ ἐνδέχεται γὰρ δοξάζοντα οἷς δοκεῖ μὴ πιστεύειν), τῶν δὲ θηρίων

dicimus id, quod videmus, apparere hominem, et talis apparentia aliquando est vera, siquidem objectum est id, quod apparet, aliquando est falsa, siquidem objectum non est id, quod apparet; sed cum exquisite et perfecte imaginamur aliquod objectum, adhuc dicimus, illud apparere nobis tale; ergo aliud est imaginari, aliud sentire.'

⁸³ 'Nor is imagination any one of the faculties which are always right, such as science or intelligence; for imagination may be false.'

⁸⁴ 'It remains, then, to consider whether imagination is opinion; for opinion may be either true or false.'

⁸⁵ One finds the same idea in Aquinas (*In de Anima*, III 5#649) and Maurus (*In De an.* 86#8).

οὐθενὶ ὑπάρχει πίστις, φαντασία δὲ πολλοῖς. (*De an.* III 3.428a19-22)⁸⁶

Indeed, as Albert explains it in a beautiful passage which throws considerable light on the nature of dialectical statements and conclusions, it is insofar as someone believes or adheres to an enunciation that he opines:

opinio est aliquando vera et aliquando falsa, sed opinioni, quae est quoddam intelligere, inhaeret fides conclusionis; non enim potest esse, quod opinans non habeat fidem de his de quibus habet opinionem. Cum enim dubitatio indeterminatus motus sit rationis ad utramque partem contradictionis, ambiguitas autem ambit utramque partem rationis per rationes aequaliter fortes, opinio stat in una parte et credit illi propter rationes, quas habet ad illam et non ad aliam, sed tamen formidat adhuc alteram partem contradictionis propter hoc quod suae rationes, quas habet ad alteram, non sunt demonstrativae, sed probabiles. Et ex hoc patet, quod omnis opinans opinione, quae est intellectus et rationis, habet fidem eius de quo habet opinionem. (Albert, *In De an.* 174)⁸⁷

Now, imagination is found in certain brute animals, whereas this is not the case for opinion. Indeed, brutes don't have belief:

ἔτι πάση μὲν δόξῃ ἀκολουθεῖ πίστις, πίστει δὲ τὸ πεπεισθαι, πειθοῖ δὲ λόγος· τῶν δὲ θηρίων ἐνίοις φαντασία μὲν ὑπάρχει, λόγος δ' οὐ. (*De an.* III 3.428a22-24)⁸⁸

Opinion engenders conviction (πίστις), and conviction leads to persuasion. Now, since being persuaded (πεπεισθαι) can only come about by reason (λόγος), it follows that opinion supposes reason:

Amplius, si omnem opinionem consequitur fides—quicumque enim opinatur, habet fidem, sic autem fidem sequitur persuasum esse, eo quod nullus est persuasus nisi qui habet fidem; persuasum autem esse consequitur ratio, eo quod nulli suadetur nisi per rationem, bestiarum autem quibusdam potest phantasia inesse, sicut supra ostenditum, licet non omnibus insit, sed ratio nulli inest bestiae—(Albert, *In De an.* 174)

⁸⁶ 'But opinion implies belief (for one cannot hold opinions in which one does not believe); and no *beast* has belief, but many have imagination.'

⁸⁷ See also Maurus, *In De an.* 86#8: 'qui enim opinatur, credit esse verum id, quod opinatur.'

⁸⁸ 'Again, every opinion is accompanied by belief, belief by conviction, and conviction by rational discourse; but although some *beasts* have imagination, they have no reasoning power.'

The conclusion of the argument, unstated by Aristotle, is made explicit by Albert in terms which leave no doubt as to the goal pursued in this case by the investigation of differences, which is to show that two things are other:

ergo phantasia non est ratio, nec opinio per consequens. (*In De an.* 174)

Thus, imagination being neither sense nor opinion, Aristotle proceeds to conclude that it cannot be essentially an opinion accompanied by sense, or even caused by it, no more than that it can consist essentially in sense and opinion:

φανερὸν τοίνυν ὅτι οὐδὲ δόξα μετ' αἰσθήσεως, οὐδὲ δι' αἰσθήσεως, οὐδὲ συμπλοκὴ δόξης καὶ αἰσθήσεως φαντασία ἂν εἴη, (*De an.* III 3.28a24-26)⁸⁹

But, Aquinas comments, he doesn't add that imagination is not sense with opinion because imagination seems more to be assimilated to opinion, which can be false, than to sense, which is always true about the proper sensibles (*In de Anima*, III 5#651). Here, Aquinas is using the third and fourth instruments in order to find a difference between sense and imagination which Aristotle already alluded to in order to conclude that they were other, in the same manner as a likeness between opinion and imagination already mentioned.

To the degree that Aristotle is thus attacking Plato's opinion (a point the commentators all agree on, to my knowledge),⁹⁰ he is making use of the tools and of dialectical syllogisms in order to solve a dialectical problem. For the Master of the Academy, the image is indeed a kind of opinion: opinion accompanied by, stemming from, or mixed with sensation. For example, in the *Sophist*, Plato has the Stranger saying:

And seeing that language is true and false, and that thought is the conversation of the soul with herself, and opinion is the end of thinking, and imagination or fantasy is the union of sense and opinion [*“φαίνεται” δὲ ὁ λέγομεν σύμμιξις αἰσθήσεως καὶ δόξης*], the inference is that some of them, since they are akin to language, should have an element of falsehood as well as of truth?⁹¹

⁸⁹ 'It is clear, then, that imagination cannot be either opinion in conjunction with sensation, or opinion based on sensation, or a blend of opinion and sensation.'

⁹⁰ See for example Hamlyn 1993, 132-133.

⁹¹ 264a. This passage is often cited for *δόξα δι' αἰσθήσεως* and *συμπλοκὴ* (Plato says *σύμμιξις*) *δόξης καὶ αἰσθήσεως*. See also *Thr.* 152c: 'Then appearing and perceiving coincide in the case of hot and cold, and in similar instances; for things appear, or may be supposed to be, to each one

Thus, because an image cannot follow an opinion and a sensation bearing on different objects—for example no image can result from the combination of an opinion about the goodness of something and from a perception of its white color—‘to imagine, then,’ according to Plato, ‘is to form an opinion exactly corresponding to a direct perception’:

διὰ τε ταῦτα καὶ διότι οὐκ ἄλλου τινός ἐστιν ἡ δόξα, ἀλλ’ ἐκείνου ἐστὶν οὐ καὶ αἴσθησις· λέγω δ’, ἐκ τῆς τοῦ λευκοῦ δόξης καὶ αἰσθήσεως ἢ συμπλοκῇ φαντασία ἐστίν· οὐ γὰρ δὴ ἐκ τῆς δόξης μὲν τῆς τοῦ ἀγαθοῦ, αἰσθήσεως δὲ τῆς τοῦ λευκοῦ. τὸ οὖν φαίνεσθαι ἐστὶ τὸ δοξάζειν ὅπερ αἰσθάνεται μὴ κατὰ συμβεβηκός. (*De an.* III 3.428a26-b1)⁹²

If made explicit, therefore, the hypothesis that Aristotle is contesting is that imagination is a sensation to which one attaches belief as such or, what amounts to the same, an opinion about which one is convinced because it bears upon what is perceived by the senses. Now, it happens that false things appear to our senses, but that one nonetheless has true opinion about them. For example, the sun appears to be only the size of a quarter in diameter, but we believe in

such as he perceives them?’ [φαντασία ἄρα καὶ αἴσθησις ταῦτον ἔν τε θερμοῖς καὶ πᾶσι τοῖς τοιούτοις. Οἷα γὰρ αἰσθάνεται ἕκαστος, τοιαῦτα ἐκάστῳ καὶ κινδυνεύει εἶναι.] *Phib.* 39b: ‘When a man, besides receiving from sight or some other senses certain opinions or statements, sees in his mind the images of the subjects of them;—is not this a very common mental phenomenon? (...) And the images answering to true opinions and words are true, and to false opinions and words false; are they not?’ [‘Ὅταν ἀπ’ ὅψεως ἢ τινος ἄλλης αἰσθήσεως τὰ τότε δοξαζόμενα καὶ λεγόμενα ἀπαγαγῶν τις τὰς τῶν δοξασθέντων καὶ λεχθέντων εἰκόνας ἐν αὐτῷ ὁρᾷ πως. (...) Οὐκοῦν αἱ μὲν τῶν ἀληθῶν δοξῶν καὶ λόγων εἰκόνες ἀληθεῖς, αἱ δὲ τῶν ψευδῶν ψευδεῖς;]

⁹² ‘because the opinion relates to nothing else but the object of sensation: I mean that imagination is the blend of the perception of white with the opinion that it is white—not, surely, of the perception of white with the opinion that it is good. To imagine, then, is to form an opinion exactly corresponding to a direct perception.’ See Aquinas, *In de Anima*, III 5#652. This opinion is much further from the likelihood of the previous ones; it is much more natural, as we already said, to confuse imagining with thinking of one sort or another.

truth that it is larger than the earth.⁹³ If therefore, an image was to follow from the combination of this sensation with an opinion, it would then be necessary that someone should have rejected a true opinion that he first had, while the object remained the same, neither forgetting it, nor changing his mind about it. Now, this is impossible. Indeed, it is always by one of these three modes that someone rejects a true opinion.⁹⁴

Οὐκ ἄρα ἔν τι τούτων ἐστὶν οὔτ' ἐκ τούτων ἡ φαντασία.
(*De an.* III 3.428b9)⁹⁵

'After having established what imagination is not, Aristotle now establishes what it is.'⁹⁶ Here Aquinas, followed by Maurus and many others, applies to the case of the imagination the general affirmation of Chapter Five of Book I of the *Topics* that the problems of the same and the other serve well for the destruction of the definition:

when we can argue that things are the same or that they are different, we shall by the same method have an abundance of arguments for dealing with definitions also; for when we have shown that a thing is not the same as another we shall have destroyed the definition. (*Top.* I 5.102a5-19)

In the case we are concerned with, Aristotle would first have had to show that neither external sense, nor science, nor understanding, nor opinion can define imagination, being other than it. Aristotle therefore expounds on the characteristics of sensation and imagination, before proposing a definition of the latter which will take account of the aforementioned characteristics, in keeping with the methodological rule he set out at the beginning of the treatise:

τὰ συμβεβηκότα συμβάλλεται μέγα μέρος πρὸς τὸ εἰδέναι τὸ τί ἐστίν· ἐπειδὴν γὰρ ἔχωμεν ἀποδιδόναι

⁹³ Same example in *On Dreams* 1.458b28-29; 2.460b18-19.

⁹⁴ φαίνεται δὲ καὶ ψευδῆ, περὶ ὧν ἅμα ὑπόληψιν ἀληθῆ ἔχει, οἷον φαίνεται μὲν ὁ ἥλιος ποδιαῖος, πεπίστευται δ' εἶναι μείζων τῆς οἰκουμένης· συμβαίνει οὖν ἥτοι ἀποβεβληκέναι τὴν ἑαυτοῦ ἀληθῆ δόξαν, ἣν εἶχε, σωζομένου τοῦ πράγματος, μὴ ἐπιλαθόμενον μηδὲ μεταπεισθέντα, ἢ εἰ ἔτι ἔχει, ἀνάγκη τὴν αὐτὴν ἀληθῆ εἶναι καὶ ψευδῆ. ἀλλὰ ψευδῆς ἐγένετο, ὅτε λάθοι μεταπεσὼν τὸ πρᾶγμα (*De an.* III 3.428b1-9). See Aquinas, *In de Anima*, III 5#353-354 and *An. post.* I 6.

⁹⁵ 'Imagination, then, is not one of these things, nor a compound of them.'

⁹⁶ See Aquinas, *In de Anima*, III 6#655 and Maurus, *In De an.* 87#11. See also Tricot 1990, 179n3.

κατὰ τὴν φαντασίαν περὶ τῶν συμβεβηκότων, ἢ πάντων ἢ τῶν πλείστων, τότε καὶ περὶ τῆς οὐσίας ἔξομεν λέγειν κάλλιστα· πάσης γὰρ ἀποδείξεως ἀρχὴ τὸ τί ἐστίν, ὥστε καθ' ὅσους τῶν ὀρισμῶν μὴ συμβαίνει τὰ συμβεβηκότα γνωρίζειν, ἀλλὰ μηδ' εἰκάζειν περὶ αὐτῶν εὐμαρές, δῆλον ὅτι διαλεκτικῶς εἴρηνται καὶ κενῶς ἅπαντες. (*De an.* I 1.402b21-403a2)⁹⁷

The movement of sensation involves three likenesses with this other movement of the soul that imagination seems to be⁹⁸: same time (at least, almost so; the second movement must, at least the first time, follow upon the other); same subjects, same objects.⁹⁹ Now, everything that is moved can also move in the same way as it is moved itself. Consequently, the sense, which we know to be moved by a sensible (and this is sensation), can cause a movement like the one it undergoes (like sensation):

Ἄλλ' ἐπειδὴ ἐστὶ κινηθέντος τουδὶ κινεῖσθαι ἕτερον ὑπὸ τούτου, ἢ δὲ φαντασία κίνησις τις δοκεῖ εἶναι καὶ οὐκ ἄνευ αἰσθήσεως γίνεσθαι ἀλλ' αἰσθανομένοις καὶ ὧν αἰσθησις ἐστίν, ἐστὶ δὲ γίνεσθαι κίνησιν ὑπὸ τῆς

⁹⁷ 'The attributes contribute greatly to the knowledge of what a thing is. For when we are in a position to expound all or most of the attributes as presented to us, we shall also be best qualified to speak about the essence. For the starting-point of every demonstration is the statement of the subject's essential nature, and definitions which do not enable us to know the attributes, or even to make a tolerable guess about them, are clearly laid down merely for argument's sake and are utterly valueless.'

⁹⁸ One finds the same idea in *Ph.* VIII 3.254a29-30: ἢ γὰρ φαντασία καὶ ἡ δόξα κινήσεις τινὲς εἶναι δοκοῦσιν. Aquinas and Maurus make use of the fourth tool and of a proportion to show this aspect of the nature of the imagination: 'Praemittimus secundo, quod actus phantasiae est quidam motus. Sicut enim dum sentimus, sensus externi moventur ab externis sensibilibus, sic dum phantasmur, phantasia movetur a quibusdam imaginibus apparentibus, que vocantur phantasmata' (Maurus, *In De an.* 87#11). See Aquinas, *In de Anima*, III 6#656. The movement Aristotle is talking about concerning the imagination should not be taken in the proper sense, no more so than when used for sensation, as we will see later.

⁹⁹ Here we find the fourth tool being used, following that of the third. Sense and imagination were clearly alike, in fact imagination is a process by which we say that an image is presented to us and by which, like sense, we judge. (See *De an.* III 3.428a1-5.) But Aristotle, using the third tool, found differences between imagination and sensation (*De an.* III 3.428a5-b15), such that he would now be better positioned to appreciate the likenesses between them. For example, the fact that by these two faculties one can judge has to be qualified by the fact that the sense is always true. Moreover, that the act of imagining is not to be found in every animal, that it is not always present, that it can come about when the sense is not in act, certainly induced him to examine more carefully what the likenesses really are between imagining and sensing. See Aquinas, *In de Anima*, III 6#657: 'proponit affinitatem quam habet fantasia ad sensum, quia fantasia non potest fieri sine sensu, set est tantum in habentibus sensum, scilicet in animalibus, et est illorum tantum quorum est sensus, scilicet illorum que sentiuntur (ea enim que sunt intelligibilia tantum non cadunt in fantasiam).'

ἐνεργείας τῆς αἰσθήσεως, καὶ ταύτην ὁμοίαν ἀνάγκη εἶναι τῇ αἰσθήσει, (*De an.* III 3.428b10-14)¹⁰⁰

Now, if one supposes that imagination is the only movement to be thus similar to sensation, one can conclude that imagination is caused by sensation:

Εἰ οὖν μηθὲν ἄλλο ἔχει τὰ εἰρημένα ἢ φαντασία, τοῦτο δ' ἐστὶ τὸ λεχθέν, ἢ φαντασία ἂν εἴη κίνησις ὑπὸ τῆς αἰσθήσεως τῆς κατ' ἐνέργειαν γιγνομένη. (*De an.* III 3.428b30-429a2)¹⁰¹

Nonetheless, imagination is not the trace that sensation leaves, but the activity of the imaginative faculty. For if imagination was the trace itself, how would one explain the choice among images; how would they not be all present at once to consciousness? In fact, as Alexander explains, using a proportion in view of defining, what is left over from sensation plays, in respect to imagination, the same role as the sensible in respect to the sense faculties (*In De an.* 68.26-27).

Now, since this movement that henceforth is to be considered as consisting in imagination is caused by sensation, it involves other likenesses to sensation: imagination incites to action and to passion, and it can be true or false (*De an.* III 3.428b16-17). If, therefore, on the basis of these observed characteristics, one were to propose as a definition of imagination that it is precisely this movement that the sense in act causes, one could explain by it these characteristics of imagination. Now, Aristotle is not content with checking to see if the definition takes account of the characteristics which are better known than it is. Indeed, not only does he remark that imagination depends on sense and bears upon the sensibles, but he adds that it makes something act and be acted upon (undergo) and that it can be true or false. To do so, however, he must base himself on a much more profound and distinct knowledge of

100 'But since when a particular thing is moved another thing may be moved by it, and since imagination seems to be some kind of movement, and not to occur apart from sensation, but only to things which perceive, and in connection with what is perceptible, and since movement may be caused by actual sensation, and this movement must be similar to the sensation.' Hett translation slightly modified.

101 'If, then, no other function than imagination possesses the characteristics enumerated above, and if imagination is as we have described it, then imagination must be a movement produced by sensation actively operating.' See *On Dreams*, I.459 a17-18: ἔστι δὲ φαντασία ἢ ὑπὸ τῆς κατ' ἐνέργειαν αἰσθήσεως γιγνομένη κίνησις. Aquinas' explanation of this whole passage is quite enlightening: see *In de Anima*, III 6#655-659.

the senses and of imagination, a knowledge that the formulation of a definition of imagination has certainly contributed to.

Thus, it is because the images persist once the sensibles are absent that Aristotle can affirm that these images are able to incite animals to act:

διὰ τὸ ἐμμένειν καὶ ὁμοίως εἶναι ταῖς αἰσθήσεσι, πολλὰ κατ' αὐτὰς πράττει τὰ ζῶα, τὰ μὲν διὰ τὸ μὴ ἔχειν νοῦν, οἷον τὰ θηρία, τὰ δὲ διὰ τὸ ἐπικαλύπτεσθαι τὸν νοῦν ἐνίοτε πάθει ἢ νόσοις ἢ ὕπνῳ, οἷον οἱ ἄνθρωποι. (*De an.* III 3.429a4-8)¹⁰²

Aquinas uses the fourth tool here and proposes a likeness: 'The same', he says, 'as the senses in act move the appetite in the presence of the sensible, so too the imagination moves it in their absence' (*In de Anima*, III 6#669).

Ἡ δὲ κίνησις ἢ ὑπὸ τῆς ἐνεργείας τῆς αἰσθήσεως γινομένη διοίσει ἢ ἀπὸ τούτων τῶν τριῶν αἰσθήσεων. (*De an.* III 3.428b25-27)¹⁰³

Thus, it is also a reference to a better knowledge of the sense which allows us to explain why Aristotle still affirms at this point of his investigation, having just emphasized the likeness between the movements of imagination and sensation, that imagination can be true or false, whereas he has been affirming until now that sense differed from imagination in always being true. One has a right to ask why the effect would thus have something that the cause does not have. But this is not quite what Aristotle is saying now: on the contrary, he is presenting the movement of the imagination as similar to the movement of sense which is its cause, even in respect to truth and falsity. He claims in fact that,

καὶ ταύτην ὁμοίαν ἀνάγκη εἶναι τῇ αἰσθήσει, εἴη ἂν αὕτη ἢ κίνησις οὔτε ἄνευ αἰσθήσεως ἐνδεχομένη οὔτε μὴ αἰσθανομένοις ὑπάρχειν, καὶ πολλὰ κατ' αὐτὴν καὶ

102 'because imaginations persist in us and resemble sensations, living creatures frequently act in accordance with them, some, viz., the brutes, because they have no mind, and some, viz., men, because the mind is temporarily clouded over by emotion, or disease, or sleep.' See *On Dreams*, 2.460b4 (for the passions), b11 (for illnesses). Sleep allows room for dream representations which certain men use as guides, rightly or wrongly (see *De divinatione*, 1.462b14-17).

103 'The movement which comes about as a result of the activity of sense-perception will differ in so far as it comes from these three kinds of perception.' Hamlyn. translation

ποιεῖν καὶ πάσχειν τὸ ἔχον, καὶ εἶναι καὶ ἀληθῆ καὶ
 ψευδῆ. (*De an.* III 3.428b14-17)¹⁰⁴

That Aristotle should now be suggesting as a likeness what he earlier invoked as a difference by means of the third tool shows to what degree the procedure is dialectic. Or, rather, this shows to what point the procedure *was* dialectic. Indeed, many signs indicate that Aristotle is getting closer and closer to a knowledge that is proper and certain. For example, Aristotle tells us that he can now give the reasons for the possible truth and falsity of the imagination:

καὶ εἶναι καὶ ἀληθῆ ἢ καὶ ψευδῆ. Τοῦτο δὲ συμβαίνει
 διὰ τὰδε. (*De an.* III 3.428b17-18)¹⁰⁵

Thus, Aristotle is now in possession of the cause of this fact whose truth he noted well before, and which is in fact evident, namely, that imagination is a movement caused by the sense in act. Now, this movement will differ in so far as it comes from different kinds of perception.

Let us look at this explication in more detail. Before seeing separately each of the sensibles in Book Two, Chapter 6, Aristotle distinguished between three kinds of sensibles. More precisely, it seems he was then using the second tool in order to distinguish three senses of the word 'sensible' and two for the expression 'sensible per se':

Λέγεται δὲ τὸ αἰσθητὸν τριχῶς, ὧν δύο μὲν καθ' αὐτὰ
 φαμεν αἰσθάνεσθαι, τὸ δὲ ἓν κατὰ συμβεβηκός. Τῶν δὲ
 δύο τὸ μὲν δ' ἴδιον ἐστὶν ἐκάστης αἰσθήσεως, τὸ δὲ
 κοινὸν πασῶν. Λέγω δ' ἴδιον μὲν ὃ μὴ ἐνδέχεται ἑτέρα
 αἰσθήσει αἰσθάνεσθαι, καὶ περὶ ὃ μὴ ἐνδέχεται
 ἀπατηθῆναι, οἷον ὄψις χρώματος καὶ ἀκοὴ ψόφου καὶ
 γεῦσις χυμοῦ. Ἡ δ' ἀφῆ πλείους μὲν ἔχει διαφοράς·
 ἀλλ' ἐκάστη γε κρίνει περὶ τούτων, καὶ οὐκ ἀπατᾶται
 ὅτι χρῶμα οὐδ' ὅτι ψόφος, ἀλλὰ τί τὸ κεχρωσμένον ἢ
 ποῦ, ἢ τί τὸ ψοφοῦν ἢ ποῦ. Τὰ μὲν οὖν τοιαῦτα λέγεται
 ἴδια ἐκάστου, κοινὰ δὲ κίνησις, ἡρεμία, ἀριθμός,
 σχῆμα, μέγεθος· τὰ γὰρ τοιαῦτα οὐδεμιᾶς ἐστὶν ἴδια,
 ἀλλὰ κοινὰ πάσαις. καὶ γὰρ ἀφῆ κίνησις τίς ἐστὶν
 αἰσθητῆ καὶ ὄψει. κατὰ συμβεβηκός δὲ λέγεται

¹⁰⁴ 'since this movement [we can presume that it is the movement of the imagination caused by that of sense] must be similar to the sensation, this movement cannot exist without sensation or to things which don't perceive; in virtue of it the possessor may act and be acted upon in various ways; and the movement may be true or false.' Hett translation, modified.

¹⁰⁵ 'and the movement may be true or false. The reason for this last fact is as follows.'

αἰσθητόν, οἷον εἰ τὸ λευκὸν εἴη Διάρουσι υἱός· κατὰ συμβεβηκὸς γὰρ τούτου αἰσθάνεται, ὅτι τῷ λευκῷ συμβέβηκε τούτο οὐ αἰσθάνεται. Διὸ καὶ οὐδὲν πάσχει ἢ τοιοῦτον ὑπὸ τοῦ αἰσθητοῦ. τῶν δὲ καθ' αὐτὰ αἰσθητῶν τὰ ἴδια κυρίως ἐστὶν αἰσθητά, καὶ πρὸς ἃ ἢ οὐσία πέφυκεν ἐκάστης αἰσθήσεως. (*De an.* II 6.418a8-25)¹⁰⁶

Now, in Book Three, when Aristotle takes up this distinction again in the course of his consideration of the nature of imagination, it seems to be rather the third tool which is used, since he is now distinguishing the things designated by the word 'sensible':

ἡ αἴσθησις τῶν μὲν ἰδίων ἀληθῆς ἐστὶν ἢ ὅτι ὀλίγιστον ἔχουσα τὸ ψεῦδος. δεύτερον δὲ τοῦ συμβεβηκέναι ταῦτα <ἃ συμβέβηκε τοῖς αἰσθητοῖς>· καὶ ἐνταῦθα ἤδη ἐνδέχεται διαψεῦδεσθαι· ὅτι μὲν γὰρ λευκόν, οὐ

¹⁰⁶ The term "object of sense" is used of three ways; two of them we say that we perceive directly, and one indirectly. Of the first two, one is an object proper to a given sense, and the other is an object perceptible by all the senses. By proper object I mean that which cannot be perceived by any other sense, and concerning which error is impossible; e.g., sight is concerned with colour, hearing with sound, and taste with flavour. Touch of course has many varieties of object. Each sense has its proper sphere, nor is it deceived as to the fact of colour or sound, but only as to the nature and position of the coloured object or the thing which makes the sound. Such objects we call proper to a particular sense, but perception of movement, rest, number, shape and size is shared by several senses. For things of this kind are not proper to any one sense, but are common to all; for instance, some kinds of movement are perceptible both by touch and by sight. I call an object indirectly perceived if, for instance, the white thing seen is the son of Diare; this is an indirect perception, because that which is perceived (the son of Diare) only belongs incidentally to the whiteness. Hence the percipient is not acted upon by the thing perceived as such. But of per se perceptibles those are most strictly perceptible which are proper to a given sense, and it is to these that the special nature of the several senses is adapted.' Commentators also speak as though, in Book II, it was a question of discussing the expressions 'sensible in itself', 'proper' and 'common', and 'sensible by accident' more than of discussing the sensible things themselves. See Albert, *In De an.* 102-103: 'Dicitur autem in communi sensibile tripliciter, quorum duo quidem dicimus per se sentiri, unum autem secundum accidens. Quando autem dicimus per se sentiri aliquod sensibile, volumus intelligere per se in illo modo dicendi per se, quando subiectum est causa praedicati (...) Et ideo sensatum per se dividitur in duo, quorum unum quidem proprium est, quod sic convenit uni sensui, quod non convenit alii, sicut coloratum, in quantum coloratum agit in visum et non in alium sensum, sonus autem in auditum et non in alium sensum. Aliud autem est sensatum, quod ideo per se sentiri dicitur, quia sua intentio in sensu imprimatur coniuncta sensibili proprio'. See also Aquinas, *In de Anima*, II 13#383, 387. One can see the difference with Alexander who, in using the verb 'to be', does not make it clear that Aristotle is speaking more of words than of things: καθόλου δὲ τῶν αἰσθητῶν τὰ μὲν καθ' αὐτὰ ἐστὶν αἰσθητά, τὰ δὲ κατὰ συμβεβηκός, καὶ τῶν καθ' αὐτὰ αἰσθητῶν τὰ μὲν ἴδια ἐκάστη αἰσθήσει ἐστὶν αἰσθητά (ἄλλα μὲν γὰρ ὄψεως ἴδια αἰσθητά, ὡς τὰ χρώματα, ἄλλα δὲ ἀκοῆς, ὡς ψόφοι, (...): ἔστι γὰρ ἐκάστη αἰσθήσει αἰσθητά, ὧν οὐχ οἷον τε αἰσθέσθαι ἄλλην τινὰ αἴσθησιν καθ' αὐτά), τὰ δὲ τινὰ τῶν καθ' αὐτὰ αἰσθητῶν ἐστὶ κοινά. ἔστι δὲ τοιαῦτα, ὅσα τὸ μὲν γωνρίζεσθαι δι' αἰσθήσεως ἔχει, πλείους μέντοι εἰσὶν αὐτῶν αἰσθήσεις διάκονοι (*In De an.* 40.20-41.3).

ψεύδεται, εἰ δὲ τοῦτο τὸ λευκὸν ἢ ἄλλο τι, ψεύδεται.
 τρίτον δὲ τῶν κοινῶν καὶ ἐπομένων τοῖς συμβεβηκόσιν
 οἷς ὑπάρχει τὰ ἴδια (λέγω δ' οἷον κίνησις καὶ μέγεθος)
 [ἃ συμβέβηκε τοῖς αἰσθητοῖς]: περὶ ἃ μάλιστα ἤδη
 ἔστιν ἀπατηθῆναι κατὰ τὴν αἴσθησιν. (*De an.* III 3.428b18-
 25)¹⁰⁷

Albert also gives the impression that he sees the second tool in use in Book II and, in Book III, the third. In fact, he says about the imagination:

Et contingit ipsam esse aliquando veram et aliquando falsam. Huius autem causa oritur ex diversitate sensibilium, quae sunt tripliciter dicta, sicut in superiori libro determinavimus. (*In De an.* 175)¹⁰⁸

Thus, in Book III error is said to be explained by the diversity among the objects of the sensitive faculty, designated by the word 'sensible' whose meanings corresponding to this diversity were distinguished in Book II. We could consider this an example of the order between the uses of the second and third tools: it seems indeed that it is because one of the differences between the objects named by the same word, 'sensible', (to lead or not to an error) is not yet quite manifest to us, that Aristotle repeats it in Book III, whereas he had already presented it in Book II in order to explain the diversity in the meanings of the expression. This, therefore, is what explains the fact that imaginative movement is sometimes in what is false: the sensitive movement which is its cause is itself sometimes in what is false. Indeed, the movement caused by the perception of the proper sensible is true as long as the object is present. But the movements brought about by the perception of the common and incidental sensibles, both in their presence and their absence, can be false, especially if the sensible is far away.¹⁰⁹

¹⁰⁷ The perception of proper objects is true, or is only capable of error to the least possible degree. Next comes perception that they are attributes, and here a possibility of error at once arises; for perception does not err in perceiving that an object is white, but only as to whether the white object is one thing or another. Thirdly comes perception of the common attributes which accompany the concomitants to which the proper sensibles belong (I mean, e.g., motion and magnitude); it is about these that error is most likely to occur.'

¹⁰⁸ Aquinas also seems to be saying here that the rectitude of the imagination depends on the sort of relation that sense has to diverse things: 'Dicit ergo primo quod hoc, scilicet fantasiam esse quandoque veram et quandoque falsam, accidit propter hoc quod dicetur, quia scilicet sensus a cuius actu causatur fantasia diuersimode se habet ad veritatem et falsitatem secundum quod ad diversa comparatur' (*In de Anima*, III 6#660).

¹⁰⁹ See *De an.* III 3.428b27-30: καὶ ἡ μὲν πρώτη παρούσης τῆς αἰσθήσεως ἀληθής, αἱ δ' ἕτεραι καὶ παρούσης καὶ ἀπούσης εἶεν ἂν ψευδεῖς, καὶ μάλιστα ὅταν πόρρω τὸ αἰσθητὸν ᾖ.

ἐπεὶ δ' ἡ ὄψις μάλιστα αἴσθησις ἐστὶ, καὶ ὄνομα ἀπὸ τοῦ φάους εἴληφεν, ὅτι ἄνευ φωτὸς οὐκ ἔστιν ἰδεῖν. (*De an.* III 3.429a2-3)¹¹⁰

Imagination is closest to the best of the external senses, sight. Now, light is what causes us to see: it actualizes the transparent. In like manner, imagination is what makes us imagine: it actualizes the image, and is what makes us to 'image up' the images of things seen. Hence imagination is named from 'light', at least in Greek:

τὸ δὲ ὄνομα τῆ φαντασία ἀπὸ τῆς αἰσθήσεως, ἀφ' ἧς καὶ τὸ εἶναι. ἐπεὶ γὰρ κυριωτάτη τῶν αἰσθήσεων ἡ ὄψις εἶναι δοκεῖ, ταύτης δὲ ἡ ἐνέργεια διὰ φωτός (ἄνευ γὰρ φωτὸς ἀδύνατον τὴν κατ' ἐνέργειαν ὄψιν γενέσθαι), ἀπὸ τοῦ τῆ κυριωτάτη τῶν αἰσθήσεων αἰτίου τῆς ἐνεργείας, ὅπερ ἐστὶ τὸ φῶς, ἀπὸ τούτου τῆ φαντασία τοῦνομα. (Alexander, *In De an.* 73.3-7)

As it is impossible to see without light, in like manner it is impossible to imagine without some function of imagination which would be *like an interior light*.

Thus, to understand, by means of the fourth tool, that imagination is closer to sight than it is to the other exterior senses,¹¹¹ and that these two things (light and that in the imagination which allows us to imagine) entertain the same relationship to two other things (sight and the activity of imagining), is to consider a proportion between things belonging to fairly proximate genera. To consider these likenesses while keeping in mind, by means of the third tool, the differences between sight and the principal function of the imagination,¹¹² is useful (perhaps

¹¹⁰ 'Since sight is the chief sense, the name φαντασία (imagination) is derived from φῶς (light), because without light it is impossible to see.'

¹¹¹ It is natural that imagination, which in the order of increasing perfection is the function following immediately after sensation, should be more closely attached to the highest part of sensation. We could also say, following Albert—and this is a consequence of the first reason given—that visual imagination is more powerful than other sorts.

¹¹² If we leave aside all material aspects of the process, we can even carry over the word and use it for understanding: 'Sciendum tamen quod transferuntur corporalia in spiritualia per quamdam similitudinem, quae quidem est similitudo proportionabilitatis; et hanc similitudinem oportet reducere in aliquam communitatem univocationis vel analogiae; et sic est in proposito: dicitur enim lux in spiritualibus illud quod ita se habet ad manifestationem intellectivam sicut se habet lux corporalis ad manifestationem sensitivam' (Aquinas, *Sentences* II dist. 13 q.1, a.2).

even necessary) in order to transfer the word from its first meaning to its next derived or analogous meaning and, thus, for readily making use of the second tool.¹¹³

Knowledge, as we discovered through the use of the tools, may be either sensible or intellectual, and the sensible can be either that of the external senses or of the internal ones, such as the imagination. It is noteworthy that Aristotle first proceeds, as is his wont, to what is easier, in this case and as it is explained in the *Topics*, to distinguishing things which are furthest away, namely, sensible and intellectual knowledge, before distinguishing the things that are closer together, namely, imagination from sensible knowledge, and imagination from intellectual knowledge.

¹¹³ Alexander seems to be opting for an analogy of proportion, whereas it is rather through an analogy of attribution than through one of proportion that both Aquinas and Albert explain that imagination is named from light. Light is, indeed, a cause of sight in a certain way, and this latter is in its turn at the origin of imagination. Thus, Aquinas seems to be saying that imagination is called 'light' because it is an effect of light: 'assignat causam huius nominis. Circa quod sciendum est quod phaos in Greco idem est quod lux; et inde uenit phanos, quod est apparitio uel illuminatio, et fantasia. Dicit ergo quod, quia uisus est precipuus inter alios sensus eo quod est spiritualior, ut supra ostensum est, et plurium cognoscituius, ideo fantasia, que causatur a sensu secundum actum, accepit nomen a lumine, sine quo non contingit uidere, ut supra dictum est' (*In de Anima*, III 6#668). For Albert, imagination is not named after a cause of sight of which it is the origin: it is, rather, sight itself which is named from light, and imagination, following sight, because it causes more acts of imagination than the other senses. See *In De an.* 176. See also Maurus, *In De an.* 88#16: 'redditur ratio, cur phantasia uocetur hoc nomine. Phantasia dicitur ἀπὸ τοῦ φάους, quod significat lumen. Ratio est, quia sicut visus, qui est praecipuus inter sensus, percipit objecta propter lumen, quod facit, ut objecta, quae sine lumine non apparent, illuminata appareant; sic phantasia uidet quodammodo objecta, quae apparent in quodam lumine interiori phantasmatum.' But there are reasons for thinking, as Maurus does, that the process of imposing the senses of this word is by analogy of proportion. As Aristotle showed, the Ancients confused imagination and sensation, and it is not very likely that they were inspired in so doing by such a refined conception of the imagination as that which would be required to name its act after a cause of the sensation from which it results. Moreover, as we saw Aquinas explain it in another text, the transfer of the same word to signify the act of the agent intellect follows much more naturally the understanding of what allows a manifestation of like objects, as was the case also for light and one of the acts of imagination, than from the fact that it is rooted in sensible knowledge, one of whose species depends on light.

INTELLECTUAL KNOWLEDGE

Περὶ δὲ τοῦ μορίου τοῦ τῆς ψυχῆς ᾧ γινώσκει τε ἡ ψυχὴ καὶ φρονεῖ, εἴτε χωριστοῦ ὄντος εἴτε καὶ μὴ χωριστοῦ ἀλλὰ κατὰ λόγον, σκεπτέον τίς ἔχει διαφοράν, καὶ πῶς ποτὲ γίνεται τὸ νοεῖν. (*De an.* III 4.429a10-13)¹¹⁴

Having treated of the sensitive part of the soul and shown that understanding, both theoretical and practical, is not sensation, it remains for Aristotle to treat of the intellectual part. Making use of the third tool,¹¹⁵ he puts aside one question, and then he explains his intention. There was a doubt among the Ancients about whether the intellectual part of the soul was separable in subject from the other parts, or if it was only so in notion.¹¹⁶ Plato, in laying down the parts of the soul separated in subject from one another, assigned to them organs in different parts of the body. Now, Aristotle affirms that whatever one might think regarding this question, one thing is clear: since the intellectual soul is at least distinct by its nature,¹¹⁷ we must seek out its difference and how it becomes actualized.

According to the sense one gives to 'difference', the third tool by which one discovers it can be conceived as immediately ordered to the search for the definition. Indeed, *the discourse taking account of the essence of the thing* is from the genus and a difference.¹¹⁸ Nonetheless, the process of discovery of differences can also be considered as ultimately ordered to the definition, in the sense that Aristotle understands it in Chapter 5 of the *Topics*. After having

¹¹⁴ 'Concerning that part of the soul (whether it is separable in being, or only so in thought) with which the soul knows and thinks, we have to consider what is its distinguishing characteristic, and how thinking comes about.' Hett translation, modified.

¹¹⁵ He is putting into evidence the judgment implied in the instrumental act.

¹¹⁶ The same question is raised above, among other places, in *De Anima* II 2.413b13.

¹¹⁷ We saw in *De Anima* III 3.427b6 that the intellect must be distinguished from sense since intellect does not belong to all animals, nor is it always true. But at the point we have now reached we can have doubts about the second argument, since it has been much placed in evidence that it is only in respect to their proper objects that the senses are always true. This is more the case than when we formulated the argument in which Aristotle had already made explicit all the necessary elements to making clear its weakness, since he affirmed that the senses are always true *about their proper objects*, whereas the intellect is often false. Now, we are not yet in a position to deny this characteristic of the intellect.

¹¹⁸ *Top.* I 5.101b35

shown that intellect is not sense, but this time by more differences than in Chapter 3, the position that the intellect can be defined by the sense or as sense is destroyed.¹¹⁹

Given the singular form of the noun διαφορά, plus the fact that Aristotle has already established by means of at least one difference that intellect and sense are other, the first interpretation seems to me the better. It would now be a question of knowing the nature of the intellect. This intention would establish that already in Chapter 3 the use of the third tool to show the intellect is not sense was ordered to the destruction of the definition of the first by the second. In this regard it is difficult not to notice that one of the examples Aristotle gives in Chapter 5 of the *Topics* is precisely about knowledge and sense.¹²⁰

εἰ δὴ ἐστὶ τὸ νοεῖν ὡσπερ τὸ αἰσθάνεσθαι, ἢ πάσχειν τι ἄν εἴη ὑπὸ τοῦ νοητοῦ ἢ τι τοιοῦτον ἕτερον. ἀπαθὲς ἄρα δεῖ εἶναι, δεκτικὸν δὲ τοῦ εἴδους καὶ δυνάμει τοιοῦτον ἀλλὰ μὴ τοῦτο, καὶ ὁμοίως ἔχειν, ὡσπερ τὸ αἰσθητικὸν πρὸς τὰ αἰσθητά, οὕτω τὸν νοῦν πρὸς τὰ νοητά. (*De an.* III 4.429a13-18)¹²¹

Before proceeding to a proper explanation of these words of Aristotle, it is worth noting that in 429a13-15, he seems to be contradicting himself. In fact, he affirms one after the other that if understanding is like sensation, it must consist in a passion and then that, like sense, intellect must be impassible. This shows well enough that it is only in a broader use that 'undergoing' is attributed to the sense, and this is a good opportunity, before going back to Book Three, to examine how the use of the second tool in Book II revealed two meanings of the word πάσχειν. This word can designate either a material change or knowing and, in this latter sense, only 'reception' is kept from the first meaning. There is thus no contradiction in

¹¹⁹ Many commentators seem to adopt this interpretation. See Themistius, *In De an.* 94.3-4; Albert, *In De an.*, 177; Aquinas, *In de Anima*, III 7#674; Maurus, *In De an.* 89#1; Tricot 1990, 173n6.

¹²⁰ See *Top.* I 5.102a6-7: ὁμοίως δὲ καὶ τὸ πότερον ταῦτὸν αἴσθησις καὶ ἐπιστήμη ἢ ἕτερον.

¹²¹ 'If it [the part of the soul with which the soul knows and thinks] is analogous to perceiving, it must be either a process in which the soul is acted upon by what is thinkable, or something else of a similar kind. This part, then, must (although impassible) be receptive of the form of an object, *i.e.*, must be potentially the same as its object, although not identical with it: as the sensitive is to the sensible, so must mind be to the thinkable.' It is striking that when Aristotle undertakes to make clear what the essential differences are between the intellect and the senses (which he already knows are different), he starts to do so by noting the likenesses.

the passage by which we introduced the question, since one should take the first occurrence of $\pi\acute{\alpha}\chi\epsilon\iota\nu$ with restriction. The word then means the fact of *receiving*.¹²²

Thus, after having treated of the vegetative part, and at the start of the consideration of the sensitive part where it is first of all a question of the relation between the sense and the sensible in general, Aristotle seeks to examine a saying of the Ancients, namely, that sensing is an undergoing, since the sense in act consists in an alteration and what is altered undergoes:

ἢ δὲ αἰσθησις ἐν τῷ κινεῖσθαι τε καὶ πᾶσχειν
 συμβαίνει, καθάπερ εἴρηται. βόκει γὰρ ἀλλοιωσις τις
 εἶναι. (*De an.* II 5.416b32-34)¹²³

Now, the distinctions that Aristotle makes with a view to showing the different ways in which the sense can be brought into act furnish examples of the use of the second tool.

Taking this as a sign that the sense is sometimes in act, Aristotle first explains that 'to sense' can be said either of the faculty or of the operation:

ἐπειδὴ δὲ τὸ αἰσθάνεσθαι λέγεται διχῶς (τὸ τε γὰρ
 βυβαίνει καὶ ὁρῶν ἀκούειν καὶ ὁρᾶν λέγεται, καὶ
 τυχῆ καθεύδον, καὶ τὸ ἡδὴ ἐπεργεῖν), διχῶς αὖ λέγεται
 καὶ ἡ αἰσθησις, ἢ μὲν ὡς βυβαίνει, ἢ δὲ ὡς ἐπεργεῖται.
 ὁμοίως δὲ καὶ τὴ αἰσθητὸν, τὸ τε βυβαίνει ὅν καὶ τὸ
 ἐπεργεῖται. (*De an.* II 5.417a9-13)¹²⁴

Here, Aristotle is clearly making use of the second tool. Furthermore, as we saw, one of the places described in chapter 15 of the *Topics* to determine if a word has many meanings is based on words having the same root and different inflexions. Thus, if 'to sense' has many meanings, it is at least possible, by a certain extension of the above place, that 'sensation' will

122 This is what Aquinas says 'passio' signifies when it is taken in its broadest meaning: 'secundum receptionem tantum, dicitur quod sentire et intelligere est quoddam pati' (*Istiae q.22 a.1 resp.*). See also *Ia q.79 a.2; q.97 a.2; Istiae q.41 a.1 c.* Aquinas claimed (incorrectly, of course) the Latin word 'passio' comes from the Greek for 'to receive' (see also *De Ver.* q.26 a.1), as did Albert.

123 Sensation consists, as has been said, in being moved and acted upon: for it is held to be a sort of change of state. See also *De an.* II 4.415b24: ἢ μὲν (...) αἰσθησις ἀλλοιωσις τις εἶναι βόκει.

124 Since we speak of perceiving in two ways (for we speak of that which potentially hears and sees as hearing and seeing, even if it happens to be asleep, as well as of that which is actually doing these things); perception too will be so spoken of in two ways, the one as in potentiality, the other as in actuality. Similarly with the object of perception too, one will be potentially, the other actually. Hamlyn translation

have as many. Now, this is just what Aristotle says: ἐπειδὴ δὲ τὸ αἰσθάνεσθαι λέγομεν διχῶς (...) διχῶς ἂν λέγοιτο καὶ ἡ αἴσθησις (*De an.* II 5.417a9-12).

Aristotle then applies the distinction of ability-act to the intellect, separating at that point two senses of ability and of act, sometimes referred to as the first and second:

Διαιρετέον δὲ καὶ περὶ δυνάμεως καὶ ἐντελεχείας. Νῦν γὰρ ἀπλῶς λέγομεν περὶ αὐτῶν. Ἔστι μὲν γὰρ οὕτως ἐπιστήμῳ τι ὡς ἂν εἴποιμεν ἄνθρωπον ἐπιστήμονα, ὅτι ὁ ἄνθρωπος τῶν ἐπιστημόνων καὶ ἐχόντων ἐπιστήμην· ἔστι δ' ὡς ἤδη λέγομεν ἐπιστημόνων τὸν ἔχοντα τὴν γραμματικὴν (ἐκάτερος δὲ τούτων οὐ τὸν αὐτὸν τρόπον δυνατός ἐστιν (...))· ὁ δ' ἤδη θεωρῶν, ἐντελεχεία ὢν καὶ κυρίως ἐπιστάμενος τόδε τὸ Α. (*De an.* II 5.417a21-29)¹²⁵

Of these three states, says Aquinas, the last is only in act, the first, only in ability, whereas the second is in act in relation to the first, and in ability in relation to the last. It is therefore evident that 'to be in ability' is said in two ways, namely, as the first and second states, and that 'to be in act' is said in two ways, as the second and third (*In de Anima*, II 11#361). And thus the intellect proceeds in different ways from ability to act:

ἀμφοτέροι μὲν οὖν οἱ πρῶτοι κατὰ δύναμιν ἐπιστήμονες, ἀλλ' ὁ μὲν διὰ μαθήσεως ἀλλοιωθεὶς καὶ πολλάκις ἐξ ἐναντίας μεταβαλὼν ἔξεως, ὁ δ' ἐκ τοῦ ἔχειν τὴν ἀριθμητικὴν ἢ τὴν γραμματικὴν, μὴ ἐνεργεῖν δέ, εἰς τὸ ἐνεργεῖν, ἄλλον τρόπον. (*De an.* II 5.417a30-b2)¹²⁶

¹²⁵ 'But we must also distinguish certain senses of potentiality and actuality; for so far we have been using these terms quite generally. One sense of "knower" is that in which we might call a man a knower because he is to be counted amongst those able to know and to possess science. But there is another sense in which we call a knower a person who knows (say) grammar. Each of these two has capacity, but in a different sense (...) But there is a third kind knower—the man who is already exercising his knowledge; he is in actuality a knower and in the strict sense knows (e.g.) this particular A.' Hett translation, modified. If the use of the second tool leaves no doubt, one can nonetheless wonder if Aristotle is having recourse here to the place which consists in looking to see if the things named by the same word—in this case first and second ability and pure act—fall into different, non-subordinated genera, which here would be natural ability (δύναμις), acquired disposition (ἔξις) and undergoing in act (πάσχειν). See *Top.* I 15.107a30.

¹²⁶ 'The first two men are both only potentially instructed; but whereas the one becomes so in actuality through a qualitative alteration by means of learning, and after frequent changes from a contrary state, the other passes by a different process from the inactive possession of arithmetic or grammar to its active exercise.'

From the ability in the first way, someone is reduced to act because he is changed by teaching and moved by someone else who knows in act, whereas he who is in ability in the second way, having the habit already, proceeds to act without an exterior agent, from possessing the habit itself.

Now, before affirming that what he has shown about the intellect applies equally to the senses, Aristotle, in respect of these two kinds of passage from ability to act, explains that one cannot speak of 'undergoing' except in a broad sense—this implies the use of the second tool once again—since there are, in fact, many senses of 'undergoing':

οὐκ ἔστι δ' ἀπλοῦν οὐδὲ τὸ πάσχειν, ἀλλὰ τὸ μὲν φθορὰ
τις ὑπο τοῦ ἐναντίου, τὸ δὲ σωτηρία μᾶλλον τοῦ
δυνάμει ὄντος ὑπὸ τοῦ ἐντελεχείᾳ ὄντος καὶ ὁμοίου
οὕτως ὡς δύναμις ἔχει πρὸς ἐντελέχειαν· θεωροῦν γὰρ
γίνεται τὸ ἔχον τὴν ἐπιστήμην, ὅπερ ἢ οὐκ ἔστιν
ἀλλοιοῦσθαι (εἰς αὐτὸ γὰρ ἢ ἐπίδοσις καὶ εἰς
ἐντελέχειαν) ἢ ἕτερον γένος ἀλλοιώσεως. (*De an.* II 5.417b2-
7)¹²⁷

Thus Aristotle suggests that 'to undergo' means either an alteration, mutation towards privative dispositions (from a state originally good or bad), or a change towards a perfection and actualization of an ability of the patient which does not imply the destruction of any form. Now, both he who actualizes an ability which he has already and he who acquires a new one, perfects himself, and does so without losing any form:

διὸ οὐ καλῶς ἔχει λέγειν τὸ φρονοῦν, ὅταν φρονῆ,
ἀλλοιοῦσθαι, ὡσπερ οὐδὲ τὸν οἰκοδόμον ὅταν οἰκοδομῆ.
(...) τὸ δ' ἐκ δυνάμει ὄντος μανθάνον καὶ λαμβάνον
ἐπιστήμην ὑπὸ τοῦ ἐντελεχείᾳ ὄντος καὶ διδασκαλικοῦ
ἦτοι οὐδὲ πάσχειν φατέον, ὡσπερ εἴρηται, ἢ δύο
τρόπους εἶναι ἀλλοιώσεως, τὴν τε ἐπὶ τὰς στερητικὰς
διαθέσεις μεταβολὴν καὶ τὴν ἐπὶ τὰς ἕξεις καὶ τὴν
φύσιν. (*De an.* II 5.417b8-16)¹²⁸

¹²⁷ 'Even the term "undergoing" is not used in a single sense, but sometimes it means a form of destruction of something by its contrary, and sometimes rather a preservation of that which is potential by something actual which is like it, in accordance with the relation of potentiality to actuality; for that which merely possesses knowledge comes to exercise it by a process which either is not alteration at all (for the development is into its real self or actuality), or else is another kind of alteration.'

¹²⁸ 'So it is not sound to describe that which thinks as being altered when it thinks, any more than it is true to say that the builder is altered when he builds (...) and that which, starting with a potentiality for knowledge,

Aquinas' explanation is very interesting. Neither of these phenomena can be called 'undergoing' in the strict sense, since they imply no contrariety. It is evident that when the person who has the habit of science starts thinking according to this habit, he is not being moved from one contrary to another, but is being perfected according to what he has already. In the same way, the person who learns acquires the science he is able to acquire. Thus, Aristotle says that if we wish to speak about undergoing, we must also speak about two kinds of alteration, one in the strict sense, which is a change towards contraries, and which is not involved here, and another in a broad sense, which is a change of a subject towards what is natural to it, 'absque eo quod aliquid abiciatur' (without their being anything eliminated), Aquinas says (*In de Anima*, II 11#367-369).

One might think that Aristotle made use of the intellect as an example of the distinction that one must make between first and second ability, since in sense the passage between the two, coming about naturally, is less well known to us:

τοῦ δ' αἰσθητικοῦ ἢ μὲν πρώτη μεταβολὴ γίνεται ὑπὸ τοῦ γεννῶντος, ὅταν δὲ γεννηθῆ, ἔχει ἤδη ὡσπερ ἐπιστήμην καὶ τὸ αἰσθάνεσθαι. καὶ τὸ κατ' ἐνέργειαν δὲ ὁμοίως λέγεται τῷ θεωρεῖν' (*De an.* II 5.417b16-19)¹²⁹

Aristotle indeed applies what he has said of the intellect to the sense: when the animal is generated, it acquires sense ability just as the intellect acquires science by learning, which, once possessed, allows it to understand just as the sense can sense. But he does not fail to underline the difference by means of the third tool:¹³⁰

διαφέρει δέ, ὅτι τοῦ μὲν τὰ ποιητικὰ τῆς ἐνεργείας ἔξωθεν, τὸ ὀρατὸν καὶ τὸ ἀκουστόν, ὁμοίως δὲ καὶ τὰ λοιπὰ τῶν αἰσθητῶν. αἴτιον δ' ὅτι τῶν καθ' ἕκαστον ἢ κατ' ἐνέργειαν αἴσθησις, ἢ δ' ἐπιστήμη τῶν καθόλου· ταῦτα δ' ἐν αὐτῇ πῶς ἐστὶ τῇ ψυχῇ. διὸ νοῆσαι μὲν ἐπ'

learns and acquires knowledge from what is actual and able to teach, either ought not to be described as "being acted upon," as has been said, or else there are two senses of alteration, one a change to negative condition, and the other a change to a positive state, that is, a realization of its nature.'

¹²⁹ 'In sentient creatures the first change is caused by the male parent, and at birth the subject has sensation in the sense in which we spoke of the mere possession of knowledge. Again, actual sensation corresponds to the exercise of knowledge.'

¹³⁰ 'quia posuerat similitudinem inter sentire in actu et considerare, vult ostendere differentiam inter ea', Aquinas says (*In de Anima* II 12#375).

αὐτῷ, ὁπότεν βούληται, αἰσθάνεσθαι δ' οὐκ ἐπ' αὐτῷ·
ἀναγκαῖον γὰρ ὑπάρχειν τὸ αἰσθητόν. (*De an.* II 5.417b19-26)¹³¹

The objects of the intellect being universal and, therefore, in the intellect itself, this latter can come to act as it wishes, whereas the sense is dependent on the presence of sensible exterior individuals, who are its objects, to perceive. Then, having indicated that he will further develop this theme in Book III, when comparing the sense to the intellect, Aristotle repeats:

νῦν δὲ διωρίσθω τοσοῦτον, ὅτι οὐχ ἀπλοῦ ὄντος τοῦ
δυνάμει λεγομένου, ἀλλὰ τοῦ μὲν ὡσπερ ἄν εἴποιμεν
τὸν παῖδα δύνασθαι στρατηγεῖν, τοῦ δὲ ὡς τὸν ἐν
ἡλικία ὄντα, οὕτως ἔχει τὸ αἰσθητικόν. ἐπεὶ δ'
ἀνώνυμος αὐτῶν ἡ διαφορὰ, διώριστα δὲ περὶ αὐτῶν
ὅτι ἕτερα καὶ πῶς ἕτερα, χρῆσθαι ἀναγκαῖον τῷ
πάσχειν καὶ ἀλλοιοῦσθαι ὡς κυρίοις ὀνίμασιν· τὸ δ'
αἰσθητικὸν δυνάμει ἐστὶν οἷον τὸ αἰσθητὸν ἤδη
ἐντελεχεία, καθάπερ εἴρηται. (*De an.* II 5.417b30-418a5)¹³²

Now, it is by the possession of that ability to become the sensible in act that the thing is said to be receptive in the broad sense of alteration that Aristotle described as a movement towards the dispositions of the thing or its nature.¹³³ Thus, using the fourth tool to see the likeness between the ability to become the sensible in act on the part of the sense and to become the intelligible in act on the part of the intellect, on the one hand, and the ability to receive something which brings about a loss, as is the case in alteration, on the other, and doing so while keeping in mind their difference, allows one to master the second tool better. Another

¹³¹ 'with this difference, that the objects of sight and hearing (and similarly those of the other senses), which produce the actuality of sensation are external. This is because actual sensation is of particulars, whereas knowledge is of universals; these in a sense exist in the soul itself. So it lies in man's power to use his mind whenever he chooses, but it is not in his power to experience sensation; for the presence of the sensible object is essential.'

¹³² 'For the moment it will be enough to establish that the term "potential" is used with two meanings; first as we might say of a boy that he is a potential general, and secondly as we might say it of an adult. These two meanings apply also to the potentially sentient. But since there is no name corresponding to this difference in meaning, and we have now explained that the meanings differ, and how they differ, we must continue to use the phrases "to undergo" and "altered" as though they were precise terms. The sentient subject, as we have said, is potentially such as the object of sense is actually.'

¹³³ 'Et licet alterari et pati non proprie dicatur aliquid, secundum quod exit de potentia secunda in actum, [puta] prout habens sensum fit actu sentiens: tamen necesse est uti hoc ipso quod est pati et alterari, ac si essent nomina propria et convenientia: quia sensitivum in potentia est quale est in actu sensibile' (Aquinas, *In de Anima*, II 12#382).

interesting characteristic of Aristotle's use of this tool here is that he distinguished the senses that are further apart—ability and actuality—before trying to distinguish those closer together—first and second ability and actuality.

Aristotle ends Book II by contrasting that sort of reception proper to the senses and the intellect with natural or material reception following upon the action of a contrary agent: that is, 'undergoing' strictly speaking:

καθόλου δὲ περὶ πάσης αἰσθήσεως δεῖ λαβεῖν ὅτι ἡ μὲν αἰσθησίς ἐστὶ τὸ δεκτικὸν τῶν αἰσθητῶν εἰδῶν ἄνευ τῆς ὕλης, (*De an.* II 12.424a17-19)¹³⁴

Insofar as every agent acts in virtue of its form and not its matter, this is common to every patient. Thus, for Aristotle, air only receives the form of fire, while losing the form it had. Nonetheless, as Aquinas notes, one difference does remain in the way of receiving, for the form received by a natural patient retains the same mode of being as it had in the agent, and this is so because the material disposition to this form of the patient is the same as that of the agent (*In de Anima*, II 24#551-554). In such a case, it is said that the form is received in the matter—from which we get the expression 'natural reception'—to the degree that the matter of the patient receives the form in the same way as the matter of the agent receives it. It is in this way that the air receives the form of the fire, as also do all other things which undergo a natural action.

In sense reception, however, the form does not have the same mode of being in the sense faculty as in the sensible object, since the sense faculty does not have the same disposition to the form as the object. Indeed, the form is a part of the sensible thing, whereas, in the sense faculty, although it is apprehended through an organ in which it is received materially, it is not really received in matter as sensible, but rather in the sensitive soul as an intentional being, although according to certain material conditions:

οἶον ὁ κηρὸς τοῦ δακτυλίου ἄνευ τοῦ σιδήρου καὶ τοῦ χρυσοῦ δέχεται τὸ σημεῖον, λαμβάνει δὲ τὸ χρυσοῦν ἢ

¹³⁴ 'We must understand as true generally of every sense that sense is that which is receptive of the form of sensible objects without the matter.' Hett translation, slightly modified. See also *De an.* III 2.425b24.

τὸ χαλκοῦν σημεῖον, ἀλλ' οὐχ ἢ χρυσοῦς ἢ χαλκός (*De an.*
II 12.424a17-21)¹³⁵

The wax does not have the same disposition to the image of the ring as iron or gold. It becomes likened to the image of what is gold, but not to the disposition of the gold to that image. Thus, just as the wax takes on the form of something without having its matter, in like manner the sense receives the form of the sensible object without its matter, and without the form of the sense being replaced by that of the sensible. It thus receives the form of the sensible as that of the sensible, and not as its own. Taste and sight do not have the same disposition to sweet and to colored as do honey and stone. The hypothetical syllogism depends on an implicit major premise, founded on a proportion: the sense is to the sensible form as the wax is to the image. The two relations imply reception of a form:

cera recipit figuram sigilli aurei ac ferrei, sed sine materia auri ac ferri, ideoque aliter figura est in cera, aliter in sigillo vel annulo aureo et ferreo. Proportionaliter sensus recipit species sensibilium, puta species colorum, sonorum etc., sed aliter species et formae sensibilium sunt in sensibilibus, aliter in sensu; nam in sensibilibus sunt modo pure materiali, in sensibus autem sunt modo quodam intentionali ac vitali. Sensus igitur est potentia receptiva specierum et formarum sensibilium, non secundum esse materiale, quale habent in ipsis sensibilibus, sed secundum esse formale et intentionale, ut explicatum est. (Maurus, *In De an.* 73#1)

Furthermore, as the wax takes on the image of something, but not insofar as it belongs to that thing, in like manner the sense conserves the sensible form, but not as it belongs to the sensible object:

ὁμοίως δὲ καὶ ἡ αἴσθησις ἐκάστου ὑπὸ τοῦ ἔχοντος
χρῶμα ἢ χυμὸν ἢ ψόφον πάσχει, ἀλλ' οὐκ ἢ ἕκαστον
ἐκείνων λέγεται, ἀλλ' ἢ τοιονδί, καὶ κατὰ τὸν λόγον. (*De*
an. II 12.424a21-24)¹³⁶

Whence the senses do not undergo the colored stone as stone, nor the sweet honey as honey. They undergo the colored stone and the sweet honey as colored and as sweet only.

Let us go back to the passage of Chapter 4 of Book III:

¹³⁵ 'just as the wax receives the impression of the signet ring without the iron or the gold, and receives the impression of the gold or bronze, but not as gold or bronze'

¹³⁶ 'so in every case sense is affected by that which has colour, or flavour, or sound, but by it, not *qua* having a particular identity, but *qua* having a certain quality, and in virtue of its *form*.'

εἰ δὴ ἐστὶ τὸ νοεῖν ὡσπερ τὸ αἰσθάνεσθαι, ἢ πάσχειν τι ἂν εἴη ὑπὸ τοῦ νοητοῦ ἢ τι τοιοῦτον ἕτερον. ἀπαθὲς ἄρα δεῖ εἶναι, δεκτικὸν δὲ τοῦ εἴδους καὶ δυνάμει τοιοῦτον ἀλλὰ μὴ τοῦτο, καὶ ὁμοίως ἔχειν, ὡσπερ τὸ αἰσθητικὸν πρὸς τὰ αἰσθητά, οὕτω τὸν νοῦν πρὸς τὰ νοητά. (*De an.* III 4.429a13-18)¹³⁷

Aristotle makes use of the fourth tool in order to set up a proportion entering into an hypothetical syllogism¹³⁸ that will allow him to get to a knowledge of the relation of the intellect to its object by the better known relation of the sense to its object. Because the intellect is related to the intelligible as the sense to the sensible—we have here two relations of knowing faculties to their objects which they sometimes know in ability and sometimes in act—if the sense is impassible, but able to receive the form and is such in ability to the form, without nonetheless being identical to it, the intellect must act in respect to the intelligibles in the same way as the sense faculty in respect to sensibles and, therefore, be impassible, be able to receive the form and thus, be in ability to it, but in such wise as the latter; without, however, being identical to it.

Having used the third tool to avoid the possible confusion between the sense and the intellect, both of which are faculties by which one knows (*De an.* III 3,427b8-14), Aristotle can now consider their likeness as a help, rather than as a danger. In fact, this consideration and description of likenesses will even aid him to make clearer the nature of certain differences, such that it now seems even more to be a question of the application of the third tool to very close genera. One of the differences concerns the aforesaid impassibility:

ὅτι δ' οὐκ ὁμοία ἡ ἀπάθεια τοῦ αἰσθητικοῦ καὶ τοῦ νοητικοῦ, φανερόν ἐπὶ τῶν αἰσθητηρίων καὶ τῆς αἰσθήσεως. ἡ γὰρ αἴσθησις οὐ δύναται αἰσθάνεσθαι ἐκ τοῦ σφόδρα αἰσθητοῦ, οἷον ψόφου ἐκ τῶν μεγάλων ψόφων, οὐδ' ἐκ τῶν ἰσχυρῶν χρωμάτων καὶ ὁσμῶν οὔτε ὀρεῶν οὔτε ὁσμᾶσθαι· ἀλλ' ὁ νοῦς ὅταν

¹³⁷ 'If it [the part of the soul with which the soul knows and thinks] is analogous to perceiving, it must be either a process in which the soul is acted upon by what is thinkable, or something else of a similar kind. This part, then, must (although impassive) be receptive of the form of an object, i.e., must be potentially the same as its object, although not identical with it: as the sensitive is to the sensible, so must mind be to the thinkable.'

¹³⁸ See Aquinas, *In de Anima* III 7#676-677; Maurus, *In De an.* 89#2. Rodier 1900, 436 also admits the hypothetical form of the reasoning.

τι νοήση σφόδρα νοητόν, οὐκ ἦττον νοεῖ τὰ
ὑποδεέστερα, ἀλλὰ καὶ μᾶλλον· (*De an.* III 4.429a29-b5)¹³⁹

Sense, although it does not undergo anything by an undergoing properly speaking when actualized by the sensible, does undergo incidentally insofar as the organ can be physically affected by the sensible, even to the point of being corrupted by too strong a stimulus. This cannot happen, however, to the intellect, which has no corporeal organ: it is not subject to undergoing either as such (*per se*) or incidentally (*per accidens*). Thus, the sense loses sensation under the stimulus of too violent a sensible object, but the intellect, when it thinks the highly intelligible, is not less able to think of lesser things, but rather more able.

Before pointing out this difference in respect to the impassibility, however, Aristotle explains how, because it is like sense, the intellect receives this other attribution of sense, which is to be its objects only in ability:

ἀνάγκη ἄρα, ἐπεὶ πάντα νοεῖ, ἀμιγῆ εἶναι, ὡσπερ φησὶν
Ἄναξαγόρας, ἵνα κρατῆ, τοῦτο δ' ἐστὶν ἵνα γνωρίζῃ·
παρεμφαινόμενον γὰρ κωλύει τὸ ἀλλότριον καὶ
ἀντιφράττει (*De an.* III 4.429a18-21).¹⁴⁰

Now, since its object takes in all sensible things, and since what is in ability cannot be in act what it is able to be, it is necessary that the intellect not be composed of bodies, as was supposed, for example, by Empedocles, but rather that it be non-composed, as Anaxagoras maintained. Aristotle therefore rejects one opinion and modifies another. Making use of the first tool, he claims that Anaxagoras qualified the intellect in this way because he placed it as the beginning of every movement, and that if it had any corporeal nature, it would be unable to move that.¹⁴¹ But since we are not here considering the intellect which moves everything, but

¹³⁹ 'But that the perceptive and thinking faculties are not alike in their impassivity is obvious if we consider the sense organs and sensation. For the sense loses sensation under the stimulus of a too violent sensible object; e.g., of sound immediately after loud sound, and neither seeing nor smelling is possible just after strong colours and scents; but when mind thinks the highly intelligible, it is not less able to think of slighter things, but even more able'

¹⁴⁰ 'It is necessary then that mind, since it thinks all things, should be unmixed, as Anaxagoras says, in order that it may be in control, that is, that it may know; for the intrusion of anything foreign hinders and obstructs it.' Hett translation, modified.

¹⁴¹ Diels-Krantz, Frag. 12 is partially literal, as a parallel reference in Plato attests: εἶναι δὲ τὸ δίκαιον ὃ λέγει Ἄναξαγόρας, νοῦν εἶναι τοῦτο· αὐτοκράτορα γὰρ αὐτὸν ὄντα καὶ οὐδενὶ μεμιγμένον πάντα φησὶν αὐτὸν κοσμεῖν τὰ πράγματα διὰ πάντων ἴοντα (*Cra.* 413c). See also *De an.* I 2.405a13-19:

the intellect insofar as it understands everything, this particular middle term is not capable of showing that the intellect must be uncomposed. Rather, as Aristotle points out, we must make use of another middle to show the same thing:

Et hoc est quod addit: "hoc autem est ut cognoscat": quasi dicat: sicut Anaxagoras posuit intellectum inmixtum ut imperet, ita oportet nos ponere intellectum esse inmixtum ad hoc ut cognoscat. (Aquinas, *In de Anima*, III 7#679)¹⁴²

Once again, we have a difference here between intellect and sense, and even the most fundamental difference of the four that we will have examined:

Ex dictis apparet praecipua differentia intellectus a sensu. Quia enim virtus sensitiva non cognocit omnes differentias corporum et totam substantiam corpoream, non debet carere omni corporeitate nec debet esse incorporea; intellectus e converso quia cognoscit omnes differentias corporum et totam substantiam corpoream, debet carere omni corporeitate ac debet esse penitus incorporeus. (Maurus, *In De an.* 90#3)

Aristotle concludes that the intellect has no determinate nature before thinking, aside from what it is in ability:

ὥστε μηδ' αὐτοῦ εἶναι φύσιν μηδεμίαν ἄλλ' ἢ ταύτην, ὅτι δυνατόν. ὁ ἄρα καλούμενος τῆς ψυχῆς νοῦς (λέγω δὲ νοῦν ᾧ διανοεῖται καὶ ὑπολαμβάνει ἢ ψυχῇ) οὐθέν ἐστιν ἐνεργεία τῶν ὄντων πρὶν νοεῖν. (*De an.* III 4.429a21-24)¹⁴³

Aquinas shows that Aristotle is making use of the second tool with a view to clarity, and to be sure that both he and his reader have the same thing in mind when speaking of the intellect, but

Ἀναξαγόρας δ' ἔοικε μὲν ἕτερον λέγειν ψυχὴν τε καὶ νοῦν (...) χρῆται δ' ἀμφοῖν ὡς μιᾷ φύσει, πλὴν ἀρχὴν γε τὸν νοῦν τίθεται μάλιστα πάντων· μόνον γοῦν φησὶν αὐτὸν τῶν ὄντων ἀπλοῦν εἶναι καὶ ἀμιγῆ τε καὶ καθαρὸν. ἀποδίδωσι δ' ἄμφω τῇ αὐτῇ ἀρχῇ, τό τε γινώσκειν καὶ τὸ κινεῖν, λέγων νοῦν κινῆσαι τὸ πᾶν.

¹⁴² In *De an.* I 2.405b20, Aristotle leaves to be understood what was insufficient in the opinion of Anaxagoras, when he says that he did not explain how the intellect knows: Ἀναξαγόρας δὲ μόνος ἀπαθῆ φησιν εἶναι τὸν νοῦν, καὶ κοινὸν οὐθέν οὐθενὶ τῶν ἄλλων ἔχειν. τοιοῦτος δ' ὢν πῶς γνωριεῖ καὶ διὰ τίν' αἰτίαν, οὔτ' ἐκεῖνος εἶρηκεν οὔτ' ἐκ τῶν εἰρημένων συμφανές ἐστιν.

¹⁴³ 'Hence the mind too can have no characteristic except its capacity to receive. That part of the soul, then, which we call mind (by mind I mean that part by which the soul thinks and forms judgements) has no actual existence until it thinks.'

also to avoid fallacies. Indeed, someone who didn't distinguish 'intellect' as applied to the human intellect as a part of the soul and thus tied to a body, and 'intellect' as designating a separate, immaterial substance, might think that Aristotle means every intellect is in ability what is intelligible:

Et ne quis crederet hoc esse uerum de quolibet intellectu quod sit in potencia ad sua intelligibilia ante quam intelligat, interponit quod nunc loquitur de intellectu quo anima opinatur et intelligit; et hoc dicit ut preseruet se ab intellectu dei, qui non est in potencia, set est quodam modo actus omnium, de quo intellectu Anaxagoras dixit quod est inmixtus ut imperet. (*In de Anima*, III 7#683)

From the fact that the intellect has no determinate nature before understanding, it follows that it has no corporeal organ, and this is a new difference—easier to see and more concrete than the two differences we just discussed—¹⁴⁴ with respect to sense which, as we saw in Chapter 3, is distinct from intellect also because it is found in all animals.¹⁴⁵

διὸ οὐδὲ μεμίχθαι εὐλόγον αὐτὸν τῷ σώματι· ποιός τις γὰρ ἂν γίγνοιτο, ψυχρὸς ἢ θερμὸς, ἢ καὶ ὄργανόν τι εἶη, ὥσπερ τῷ αἰσθητικῷ· νῦν δ' οὐθέν ἐστίν. (*De an.* III 4.429a24-27)¹⁴⁶

If the intellect were an ability which was actualized by an organ, having to be conformed to this organ as every ability to the subject in which its act is to be found, it would then have a nature and sensible qualities. Aristotle affirms therefore that when the Ancients said that 'the soul is the place of forms' they were correct in as much as one understands that it is because the intellectual soul does not have an organ. Indeed, if it had one, as does the sensitive soul, this statement would be false: the composite, and not the soul, would receive the intelligible species. For example, both sight and the eye receive colors. Thus, Aristotle corrects what they said by making clear that one should not say that the soul is the place of forms, but rather that its

¹⁴⁴ This fourth difference follows nonetheless from two of the three others. Indeed, it is because it is an ability to be all things, whereas the sense is only able to be its proper object, that the intellect cannot have a determinate nature before knowing. And since it has no determinate nature, it cannot even have a corporeal organ. Whence its impassability, of which we spoke earlier.

¹⁴⁵ *De an.* III 3.427b7-8

¹⁴⁶ 'So it is unreasonable to suppose that it is mixed with the body; for in that case it would become somehow qualitative, e.g., hot or cold, or would even have some organ, as the sensitive faculty has; but in fact it has none.'

intellective part is (*De an.* III 4.429a27-29); nor that these forms (or species) are actually there, but that they are so only in ability:

διὸ καὶ οὐκ ἀλόγως εἶπον τινὲς ἀπὸ τῆς τοῦ νοῦ
δυνάμεως κινούμενοι τόπον εἰδῶν τὴν ψυχὴν εἶπον
εἶναι, ὃ τῷ κυριωτάτῳ τῆς ψυχῆς ὑπάρχει, τοῦτ' ἐπὶ
πᾶσαν αὐτὴν μεταφέροντες. τόπος δ' ἂν εἴη τῶν εἰδῶν
οὐ κατ' ἐνέργειαν (οὐδὲν γὰρ κατὰ τὴν αὐτοῦ φύσιν τῶν
εἰδῶν ἔχων ἐδείχθη), ἀλλ' ὡς δυνάμενος αὐτὰ
λαμβάνειν τόπος αὐτῶν ἂν εἴη δυνάμει κατὰ τοῦτο.
(Alexander, *In De an.* 85.5-10)¹⁴⁷

Now, the second, third and fourth tools help to understand the opinion obtained by the first tool.¹⁴⁸ For it is necessary to distinguish various senses of 'place' to judge it. Now, to do so, it is useful to grasp the likenesses and the differences between the things designated here by this word, that is, between a physical place and the intellect:

potest uerificari dictum illorum qui dixerunt quod anima est locus
specierum, quod per similitudinem dicitur eo quod est specierum receptiva.
(Aquinas, *In de Anima*, III 7#686)

In short, Aristotle first makes use of a likeness between the senses, already studied, and intellect, in order to make known the latter, which is less known.¹⁴⁹ Then, once the nature of the intellect has been made clear, he indicates how the characteristics known to belong to the senses, and which have now been shown by means of an hypothetical syllogism based on their likeness to belong also to the intellect, namely being their objects in ability¹⁵⁰ and being impassible,¹⁵¹ belong nonetheless differently to the intellect. This is a good example of a fruitful consideration of likenesses ultimately ordered to definition, but which does not lose sight of the differences. Having used a likeness of relation between sense and intellect, and not

¹⁴⁷ Aristotle's reticence bears thus on two points: only νοῦς among the faculties of the soul, can be the place of Ideas; on the other hand, it is only a question of Ideas in ability (a restriction which will transform Plato's conception).

¹⁴⁸ According to the majority of the commentators, this is clearly an allusion to the Platonic doctrine, even if τόπος εἰδῶν is to be found nowhere in the Dialogues.

¹⁴⁹ *De an.* III 4.429a13-18

¹⁵⁰ *De an.* III 3.429a18-29

¹⁵¹ *De an.* III 4.429a29-b5

one of identity—the sense is not exactly related to the sensible as the intellect to the intelligible—that which was known to belong to sense will belong also to intellect, but not exactly in the same way. Having all sensible forms as objects, ‘being in potency what it is able to know without being identical to it’, means, in the case of the intellect, not having any of these forms in act and, thus, being completely incorporeal. From this follows its particular way of being impassible.¹⁵²

Aquinas’ conclusion is interesting. It shows how Aristotle, insisting on the incorporeality of the intellect, has in fact found a difference between the intellect and the imagination other than those he laid out previously in order to show, through the habits of the intellect, that the latter is not the same as imagination:

Ex hiis autem que hic dicuntur apparet falsitas opinionis illorum qui dixerunt quod intellectus est uis ymaginatiua uel aliqua preparatio in natura humana consequens corporis complexionem. (Aquinas, *In de Anima*, III 7#689)

Aristotle had in fact already made clear in Chapter 3 that imagination is often false, whereas the understanding of principles and science bear only on the true,¹⁵³ and that opining is always accompanied by belief and, therefore, supposes reason, whereas imagination belongs to all animals.¹⁵⁴ This is a beautiful illustration of another of Aristotle’s dearest methodological principles: the objects of the faculties are better known to us than their acts, and these are better known than the faculties themselves.¹⁵⁵

Having shown that the intellect is only the forms in ability, Aristotle now explains how it passes into act. Using again the example of a person who knows something but is not

¹⁵² ‘sensus efficitur inpotens ad sciendum ex ualde sensibili (...) set intellectus, quia non habet organum corporeum quod corrumpi possit ab excellencia proprii obiecti, cum intelligit aliquid ualde intelligibile, non minus postea intelligit infima, set magis; et idem accideret de sensu, si non haberet organum corporale (...) Causa igitur huius diuersitatis est quod sensitium non est sine corpore, set intellectus est separatus’ (Aquinas, *In de Anima*, III 7#688).

¹⁵³ *De an.* III 3.428a16-18

¹⁵⁴ *De an.* III 3.428a22-24

¹⁵⁵ *De an* I 1.402b9-16

presently thinking it—who is, therefore, in a certain way knowing only in ability—¹⁵⁶ he reintroduces the difference¹⁵⁷ between two kinds of ability:

ὅταν δ' οὕτως ἕκαστα γένηται ὡς ἐπιστήμων λέγεται ὁ
κατ' ἐνέργειαν (τοῦτο δὲ συμβαίνει, ὅταν δύνηται
ἐνεργεῖν δι' αὐτοῦ), ἔστι μὲν καὶ τότε δυνάμει πῶς, οὐ
μὲν ὁμοίως καὶ πρὶν μαθεῖν ἢ εὐρεῖν. (*De an.* III 4.429b5-9)¹⁵⁸

The distinction is also one between two kinds of act, since he who is in ability in the second way is in act differently from him who is in act completely, in this case, the knowing person who is presently thinking.

Aristotle then shows what the object is in respect to which the intellect comes to be in act. The natures or essences of natural and mathematical things, which exist in matter, are other than the natural and mathematical things themselves, according to Aristotle. But whereas Plato said that they were other in being and in subject, Aristotle maintained that they were only different in notion. And this allowed him to conclude, against Plato, that the proper object of the human intellect is the natures of these things themselves, natures that are not separated from them. Aristotle thus certainly made use of a dialectical tool, being influenced in his way of introducing the question by Plato's opinion:

ἐπεὶ δ' ἄλλο ἐστὶ τὸ μέγεθος καὶ τὸ μεγέθει εἶναι καὶ
ὔδωρ καὶ ὕδατι εἶναι (οὕτω δὲ καὶ ἐφ' ἑτέρων πολλῶν,
ἀλλ' οὐκ ἐπὶ πάντων· ἐπ' ἐνίων γὰρ ταῦτόν ἐστι) (*De an.*
III 4.429b10-12)¹⁵⁹

Plato held that the natures of things, which he called ideas or forms (species), existed separately from the individual things. Now, for Aristotle it is only because of matter and its

¹⁵⁶ In Book IX of the *Metaphysics*, when Aristotle is showing what an act is, the man who knows but who is not presently thinking is said to be in ability in respect to the one who is thinking. See IX 6.1048a30-35.

¹⁵⁷ See indeed *De an.* II 1.412a22-27; 5.417a21-b1.

¹⁵⁸ 'When the intellect has become each thing in the way that one who actually knows is said to do so (and this happens when he can exercise his capacity by himself), it exists potentially even then in a way, although not in the same way as before it learned or discovered.' Hamlyn translation. The words show how the use of the second and third tools overlap.

¹⁵⁹ 'Since a magnitude is not the same as the essence of magnitude, nor water the same as the essence of water (and so too in many other cases, but not in all, because in some cases there is no difference)'

accidents that the essence of a material thing is not the thing of which it is the essence: the essence only contains the principles of the species of the thing in question, whereas the latter exists with all its individuating accidents, whose principle is its individual matter.¹⁶⁰ (Socrates is not his humanity.) In the case of simple and separate forms, however, since the form is all the essence, many different individuals of the same species cannot exist, and the nature does not differ from the thing.¹⁶¹ Aristotle therefore is making use of the third tool above to indicate the dependence of the definitions on different kinds of matter—sensible matter for natural things, intelligible or imaginable matter for mathematical things—or the independence of the definition in respect to matter for separated forms. *In the same way as things are separable from matter, this is the way it is for the intellect.*¹⁶²

The determinate matter, subject to form—sensible for the natural forms, imaginable for the mathematical ones—is necessarily known either by sense or by imagination:

τὸ σαρκὶ εἶναι καὶ σάρκα ἢ ἄλλω ἢ ἄλλως ἔχοντι κρίνει· ἢ γὰρ σὰρξ οὐκ ἄνευ τῆς ὕλης, ἀλλ' ὡσπερ τὸ σιμόν τόδε ἐν τῷδε. τῷ μὲν οὖν αἰσθητικῷ τὸ θερμὸν καὶ τὸ ψυχρὸν κρίνει, καὶ ὧν λόγος τις ἢ σὰρξ· ἄλλω δὲ ἥτοι χωριστῷ ἢ ὡς ἢ κεκλασμένη ἔχει πρὸς αὐτὴν ὅταν ἐκταθῆ, τὸ σαρκὶ εἶναι κρίνει. πάλιν δ' ἐπὶ τῶν ἐν ἀφαιρέσει ὄντων τὸ εὐθύ ὡς τὸ σιμόν· μετὰ συνεχοῦς γάρ· τὸ δὲ τί ἦν εἶναι, εἰ ἔστιν ἕτερον τὸ εὐθεῖ εἶναι καὶ τὸ εὐθύ, ἄλλο· ἔστω γὰρ δυάς. ἐτέρω ἄρα ἢ ἐτέρως ἔχοντι κρίνει. (*De an.* III 4.429b12-22)¹⁶³

¹⁶⁰ See *Metaph.* VII 4 and 6; 11.1036a33.

¹⁶¹ See Maurus, *In De an.* 91#1: 'Praemittit ex dictis VII Metaphysic., cap. v et sequentibus, quod aliter se habent ad quidditatem speciei substantiae materiales, aliter substantiae immateriales. Substantiae enim materiales supra quidditatem speciei addunt materiam individualem, ex. gr. homo supra humanitatem addit materiam individuatam, suis accidentibus, per quam constituuntur individua speciei humanae constantia ex his carnibus et ossibus etc.; e converso substantiae immateriales supra quidditatem speciei nihil addunt. Idcirco quaelibet substantia immaterialis ita est sua quidditas specifica, ut nihil addat supra suam quidditatem; at substantiae materiales supra suam quidditatem addunt materiam individualem.'

¹⁶² καὶ ὅλως ἄρα ὡς χωριστὰ τὰ πράγματα τῆς ὕλης, οὕτω καὶ τὰ περὶ τὸν νοῦν (*De an.* III 4.429b21-22). 'The last sentence of the passage suggests that the intellect is concerned in different ways according to the extent to which its objects are separable from matter' (Hamlyn 1993, 138).

¹⁶³ 'we judge flesh and the essence of flesh either by different faculties, or by the same faculty in different relations; for flesh cannot exist without its matter, but like "snub-nosed" implies a definite form in a definite matter. Now it is by the sensitive faculty that we judge hot and cold, and all qualities whose due proportion

Now, insofar as things that are diverse require a diversity in the knowing powers, the natures of mathematical and of natural things, and these things themselves, will be known either by distinct powers or by the same one acting in a different way. It so happens that the intellect knows the nature and that the sense powers know the concrete thing, when the soul knows separately the nature and the concrete singular thing. But the soul must also compare the universal and the singular in order to identify the individuals in question when treating of such and such a species, for example. And to do so, the intellect must know in some way both the universal and the singular.¹⁶⁴ Aquinas uses a proportion and an hypothetical syllogism to establish that a single faculty must proceed to the comparison between the sensible things themselves and their definition, and this proportion is also valid for mathematical things:

contingit quod cognoscatur alio caro et quod quid est carnis, non quod sit alia et alia potencia, set quod una et eadem potencia alio et alio modo cognoscit carnem et quod quid est eius; et istud oportet esse cum anima comparat uniuersale ad singulare: sicut enim supra dictum est quod non possemus sentire differenciam albi et dulcis nisi esset una potencia sensitua communis que cognosceret utrumque, ita etiam non possemus cognoscere comparationem uniuersalis ad singulare nisi esset una potencia que cognosceret utrumque; (*In de Anima*, III 8#712)¹⁶⁵

Sensation is to the objects of two different senses as knowledge is to the objects of two different knowing powers, sense and intellect. Now, just as in order to compare the objects of two different senses only one sensing faculty is required, in the same way, to compare the objects of two knowing powers one single knowing power is needed.

It is therefore necessary to understand that both for natural things and for mathematical things the intellect knows the nature of the species directly, and indirectly the singular by a reflection on the phantasms or images from which the intelligible species is abstracted.

constitutes flesh; but it is by something else, either quite distinct, or related to it in the same way as a bent line to itself when pulled out straight, that we judge the essence of flesh. Again, among abstract objects "straight" is like "snub-nosed", for it is always combined with extension; but its essence, if "straight" and "straightness" are not the same, is something different; let us call it duality. Therefore we judge it by another faculty, or by the same faculty in a different relation.' Hett translation, slightly modified. We can note again in this passage the use of a dialectical tool: as an example of the fact that the essence differs from the thing itself in the case of mathematical entities also, Aristotle gives a definition of Plato's, according to whom numbers were the species and essences of mathematical things, as unity is of the point, and duality of the straight line.

¹⁶⁴ 'Et licet eodem intellectu, quo cognoscimus quidditatem rerum materialium, cognoscamus etiam individua, quorum sunt quidditas; alioquin non possemus intellectu cognoscere, quae sit quidditas individuorum, ex. gr. hujus vel illius hominis' (Maurus, *In De an.* 92#2).

¹⁶⁵ One finds the same line of reasoning in Albert, *In De an.* 199.

Whence, those things which are separated from matter in their being can be understood by the forms only; and those things which are not separated from sensible matter in being but in notion only, are understandable without sensible matter, but not without some matter, viz., imaginative (intelligible) matter; finally, those things that depend on sensible matter both for their existence and in notion (sensible things), must contain in their definitions sensible matter, but only universally, so that the intellect abstracts from singular sensible matter. Man, for example, is understood without the particular material parts that make up an individual, but not without reference to the kind of material parts that are essential for him to be a man, such as that he is made of flesh and bone, etc. Thus, the intellect knows the singular only indirectly.

The proper object of the intellect, therefore, is said to be the essence of a thing, which essence is not separated from that thing. Thus, the essences of sensible things do not reside outside of them, as the Platonists claimed, but are in sensible things, although the intellect does not apprehend them quite as they are in natural things. In fact, the individual conditions of their existence are left aside.

At this point Aristotle raises two possible difficulties (or 'aporia') against the theory presented in this chapter: 1) If the intellect is, as we have said, simple and without admixture, and possesses no property in itself (aside from its ability to know all things), and if, on the other hand, thinking is undergoing, how can thought come about in it? Every patient must in effect have something in common with the agent: it must be in ability what the agent is in act:

Ἀπορήσειε δ' ἂν τις, εἰ ὁ νοῦς ἀπλοῦν ἐστὶ καὶ ἀπαθὲς
καὶ μηθενὶ μηθὲν ἔχει κοινόν, ὥσπερ φησὶν
Ἀναξαγόρας, πῶς νοήσει, εἰ τὸ νοεῖν πάσχειν τί ἐστίν
(ἢ γάρ τι κοινὸν ἀμφοῖν ὑπάρχει, τὸ μὲν ποιεῖν δοκεῖ τὸ
δὲ πάσχειν)¹⁶⁶ (*De an.* III 4.429b22-26)¹⁶⁷

¹⁶⁶ See *Gen. corr.* I 1.314b26-27; 7.323b24-324a23. ἀνάγκη καὶ τὸ ποιοῦν καὶ τὸ πάσχον τῷ γένει μὲν ὅμοιον εἶναι καὶ ταυτό, τῷ δ' εἶδει ἀνόμοιον καὶ ἐναντίον (*Gen. corr.* I 7.323b31-33).

¹⁶⁷ 'One might raise the question: if the mind is a simple thing, and not liable to be acted upon, and has nothing in common with anything else, as Anaxagoras says, how will it think, if thinking is a form of being acted upon? For it is when two things have something in common that we regard one as acting and the other as acted upon.'

Aristotle has already declared that the intellect thinks itself.¹⁶⁸ The intellect becomes an object for itself. But how? If the intelligibility of the intellect is of the same kind as the intelligibility of the other intelligibles, and if it is not by something other than itself that it is intelligible, nothing would seem to prevent every intelligible from understanding too. On the other hand, if it is through something else that the intellect is understandable, and that all the other things that are understandable participate in this also, the intellect would be understandable in the same way as all other things, such that nothing would prevent things understood from understanding also:

ἔτι δ' εἰ νοητὸς καὶ αὐτός. ἢ γὰρ τοῖς ἄλλοις ὁ νοῦς
 ὑπάρξει (εἰ μὴ κατ' ἄλλο αὐτὸς νοητός, ἔν δέ τι τὸ
 νοητὸν εἶδει), ἢ μεμιγμένον τι ἔξει, ὃ ποιεῖ νοητὸν
 αὐτὸν ὡσπερ τὰλλα. (*De an.* III 4.429b26-29)¹⁶⁹

Is the intellect really uncomposed? Is it understandable? These are certainly 'aporia', since one is faced with opposing arguments. It has been shown that the intellect, because it is able to be all things, must be uncomposed. On the other hand, if it is uncomposed, it would seem then that it cannot undergo. In addition to Aristotle's saying so, there is one reason for thinking that the intellect must be intelligible: it does think itself. On the other hand, there is a reason to think that it cannot be intelligible, since this would seem to lead to the absurd consequence that all intelligibles are able to understand.

Making use of the second tool, Aristotle resolves the first problem by recalling that in treating of the sense, he had distinguished a meaning of 'to undergo' taken according to something common to both material reception (which the word names properly) and to simply receiving. The intellect, therefore, is said to undergo insofar as it is in ability to the intelligibles before thinking: there is, therefore, as we have seen, an actualization which consists in a certain *reception* of the intelligible in act by the intellect in as much as it only contained it before in ability.¹⁷⁰ And the intellect's ability to be identical with all things is the common element

¹⁶⁸ See *De an.* III 4.429b9: καὶ αὐτὸς δι' αὐτοῦ τότε δύναται νοεῖν.

¹⁶⁹ 'And our second problem is whether the mind itself can be an object of thought. For either mind will be present in all other objects (if, that is, mind is an object of thought in itself and not in virtue of something else, and what is thought is always identical in form), or else it will contain some common element, which makes it an object of thought like other things.'

¹⁷⁰ 'la passion proprement dite suppose, non pas seulement que le patient est en puissance, mais qu'il est en puissance ce que l'agent est en acte; que l'un et l'autre appartiennent au même genre. Le patient doit donc, non pas seulement être en puissance ce que l'agent est en acte, mais être en acte le contraire de ce qu'est l'agent.'

which makes possible the undergoing. Now, this ability in no way impedes the intellect from being uncomposed:

ἢ τὸ μὲν πάσχειν κατὰ κοινόν τι διήρηται πρότερον, ὅτι
δυνάμει πῶς ἐστὶ τὰ νοητὰ ὁ νοῦς, ἀλλ' ἐντελεχεία
οὐδέν, πρὶν ἂν νοῆ. δεῖ δ' οὕτως ὥσπερ ἐν γραμματείῳ
ᾧ μὴ ἐν ὑπάρχει ἐντελεχεία γεγραμμένον. ὅπερ
συμβαίνει ἐπὶ τοῦ νοῦ. (*De an.* III 4.429b29-a1)¹⁷¹

Aristotle uses the fourth tool in order to establish a proportion with a view to coming to know the intellect: the intelligibles are to the human intellect as non-written letters are to a tablet not written on. Indeed, pure intellectual ability is compared to the tablet, which can receive something written; it corresponds to a subject able to be understanding.¹⁷² Perhaps we can say that Aristotle is using the fourth tool also to the degree that there is a comparison of knowledge, including intellectual, with writing in wax in the *Theaethetus* (191c).

To the other difficulty, Aristotle answers that the possible intellect is not intelligible by its essence, but by some intelligible species, just like the other intelligibles. Indeed, the thing understood in act and the intellect in act are the same—one can use a proportion to understand this—just as the sensible in act and the sense in act are one. The species or form of the thing understood in act, abstracted from matter, becomes the form of the intellect in act, and it is by

Une chose qui, comme l'intellect, n'est rigoureusement parlant, rien en acte ne saurait donc avoir rien de commun avec aucun agent, et en disant plus haut que l'intellect est tout en puissance et rien en acte, nous avons dit, par cela même, qu'il ne peut pas pâtre au sens ordinaire du mot, c'est-à-dire κατὰ κοινόν τι' (Rodier 1900, 456).

¹⁷¹ 'Or there is the explanation which we have given before of the phrase "being acted upon in virtue of some common element," that mind is potentially identical with the objects of thought but is actually nothing, until it thinks. What the mind thinks must be in it in the same sense as letters are on a tablet which bears no actual writing; this is just what happens in the case of the mind.'

¹⁷² Maurus' explanation of Aristotle's solution to the first problem is very clear: 'Ad primam dubitationem dicendum, quod, ut explicatum est L. II, c. viii, n. 4, pati dicitur dupliciter, communiter et proprie. Ad passionem propriam, per quam id, quod patitur, transmutatur in contrariis qualitatibus, requiritur, ut quod proprie patitur non sit simplex, sed compositum, et habeat subjectum commune capax qualitatis, quae est in agente, eo pacto, quo aqua potest calefieri ab igne, in quantum convenit cum igne in materia et subjecto communi susceptivo tum caloris tum frigoris; at ad passionem communiter dictam, per quam subjectum pure perficatur et non transmutatur in contrariis qualitatibus, non requiritur, ut id quod patitur sit compositum atque ut conveniat in subjecto communi, sed sufficit, ut sit in potentia ad actum; sed intellectus secundum se est potentia omnia intelligibilia et est sicut tabula rasa vel sicut liber, in quo nihil fuerit scriptum: ergo potest fieri in actu et intelligere per hoc, quod recipiat formas et species intelligibilium secundum esse intentionale' (*In De an.* 93#3).

this form that the intellect can understand its own act, and thus itself. We only know our intellect because we understand that we are understanding:

καὶ αὐτὸς δὲ νοητός ἐστιν ὡσπερ τὰ νοητά. ἐπὶ μὲν γὰρ τῶν ἄνευ ὕλης τὸ αὐτό ἐστὶ τὸ νοοῦν καὶ τὸ νοούμενον· ἢ γὰρ ἐπιστήμη ἢ θεωρητικὴ καὶ τὸ οὕτως ἐπιστητὸν τὸ αὐτό ἐστίν· (*De an.* III 4.430a2-5)¹⁷³

And Aristotle answers the objection: in material things, the forms are only intelligible in ability. Now, the intelligible in ability is not the same as the intellect, but only the intelligible in act. Thus, intelligence does not belong to those things which have their form in matter. This solution requires the distinction between the intelligibles as they are in ability, or in act, and this requires the use of the third tool to show they are different, and that it is the intelligible in act which is the same as the intellect in act.¹⁷⁴

Aristotle now shows that, in addition to the possible intellect, an agent intellect must exist. he does so both by means of an argument and an example. He first gives the reason:

Ἐπεὶ δ' [ὡσπερ] ἐν ἀπάσῃ τῇ φύσει ἐστὶ [τι] τὸ μὲν ὕλη ἐκάστῳ γένει (τοῦτο δὲ ὅ πάντα δυνάμει ἐκεῖνα), ἕτερον δὲ τὸ αἴτιον καὶ ποιητικόν, τῷ ποιεῖν πάντα,

173 'It is also itself thinkable, just like other objects of thought. For in the case of things without matter that which thinks and that which is thought are the same; for speculative knowledge is the same as its object.'

174 'Quia vero intellectus est potentia sine materia et penitus immaterialis, ut dictum est, ideo ea, quae habent materiam et sunt intelligibilia solum in potentia, non sunt intellectiva; siquidem vis intellectiva sequitur ex immaterialitate' (Maurus, *In De an.* 93#5). In article 1 of question 87 of the Prima Pars, after having concluded that our intellect does not know itself through its essence, but rather by its act, Aquinas has a passage which is of interest to us. Using the third tool, he shows in fact that the knowledge that the intellect has of itself and of its existence, and the knowledge of the nature of the intellect which Aristotle set out to get at the beginning of the chapter, are not the same: 'Non ergo per essentiam suam, sed per actum suum se cognoscit intellectus noster. Et hoc dupliciter. Uno quidem modo, particulariter, secundum quod Socrates vel Plato percipit se habere animam intellectivam, ex hoc quod percipit se intelligere. Alio modo, in universali, secundum quod naturam humanae mentis ex actu intellectus consideramus.' Now, getting the second kind of knowledge requires in fact a use of the third tool: 'Est autem differentia inter has duas cognitiones. Nam ad primam cognitionem de mente habendam, sufficit ipsa mentis praesentia, quae est principium actus ex quo mens percipit seipsam. Et ideo dicitur se cognoscere per suam praesentiam. Sed ad secundam cognitionem de mente habendam, non sufficit eius praesentia, sed requiritur diligens et subtilis inquisitio. Unde et multi naturam animae ignorant, et multi etiam circa naturam animae erraverunt. Propter quod Augustinus dicit, *X de Trin.*, de tali inquisitione mentis: *Non velut absentem se quaerat mens cernere; sed praesentem quaerat discernere*, idest cognoscere differentiam suam ab aliis rebus, quod est cognoscere quidditatem et naturam suam.' Aquinas thus emphasizes the usefulness of the third tool with a view to definition.

οἶον ἢ τέχνη πρὸς τὴν ὕλην πέπονθεν, (*De an.* III 5.430a10-13)¹⁷⁵

Everything that is at some time in ability and sometimes in act (and this is the case for all natural, material beings, as Alexander notes),¹⁷⁶ must, as Aquinas interprets it, involve something which is like matter in each genus, that is, something in ability to all the individuals of this genus, as well as a formal aspect which is active and *factivum* of all these individuals.¹⁷⁷ Aristotle manifests the relation between these two elements by comparing them, through the use of the fourth tool, with the relationship between art and matter. The first is what gives a form and therefore actualises the second. Now, the intellective soul, being sometimes in act, sometimes in ability, must involve an aspect according to which it can reduce the things that are understandable to act:

ἀνάγκη καὶ ἐν τῇ ψυχῇ ὑπάρχειν ταύτας τὰς διαφοράς.
(*De an.* III 5.430a13-14)¹⁷⁸

By the third tool, Aristotle distinguishes two facets of the intellect according as it is either in ability or is active.¹⁷⁹

καὶ ἔστιν ὁ μὲν τοιοῦτος νοῦς τῷ πάντα γίνεσθαι, ὁ δὲ
τῷ πάντα ποιεῖν, ὡς ἕξις τις, (*De an.* III 5.430a14-15)¹⁸⁰

There is, therefore, an intellect which is like matter (ὕλικός νοῦς) and one which is productive (ποιητικός νοῦς).¹⁸¹ Since many commentators have proclaimed the agent

¹⁷⁵ 'Since [just as] in the whole of nature there is something which is matter to each kind of thing (and this is what is potentially all of them), while on the other hand there is something else which is their cause and is productive by producing them all—these being related as an art to its material—' Hamlyn translation.

¹⁷⁶ *In De an.* 88.17-22

¹⁷⁷ See Aquinas, *In de Anima*, III 10#728.

¹⁷⁸ 'so there must also be these differences in the soul' Hamlyn translation

¹⁷⁹ Rodier 1900, 459 has an interesting remark in respect to the comparison of the agent intellect with art, which is taken up by Tricot 1990, 181n2: 'Il faut remarquer que ce rapprochement n'a pas seulement la valeur d'une comparaison, mais contribue à justifier la conclusion: Si la distinction de la forme et de la matière se retrouve partout, dans les oeuvres de la nature comme dans celles de l'art, elle doit exister aussi dans l'âme.'

¹⁸⁰ 'And there is an intellect which is of this kind by becoming all things, and there is another which is so by producing all things, as a kind of disposition' Hamlyn translation.

¹⁸¹ See Alexander, *In De an.* 88.23-24.

intellect to be the understanding of the principles, we have to make use, as Aquinas and Tricot do, among others, of the second tool to distinguish the senses of 'habit' (ἔξις). Now, the agent intellect cannot be the understanding of the principles, which is a stable, acquired disposition, since in that case it would be necessary for something else to have acted in order for the terms presupposed to this understanding to be apprehended. Such an agent intellect would not cause all things understandable to be in act. It is, therefore, in the sense of 'form', in opposition to privation and ability that Aquinas and Tricot claim must be our understanding of 'habit' here:

Dicendum est ergo quod "habitus" hic accipitur secundum quod Philosophus frequenter consuevit nominare omnem formam et naturam habitum, prout habitus distinguitur contra priuationem et potenciam, ut sic per hoc quod nominat eum habitum distinguat eum ab intellectu possibili qui est in potencia. (Aquinas, *In de Anima*, III 10#729)¹⁸²

ἔξις, par opposition à privation, et non, au sens, que nous connaissons, de première étape de l'actualisation. (Tricot 1990, 182n1)

To allow us to understand the necessity of an agent intellect, Aristotle compares it with light:

οἶον τὸ φῶς· τρόπον γάρ τινα καὶ τὸ φῶς ποιεῖ τὰ δυνάμει ὄντα χρώματα ἐνεργεία χρώματα. (*De an.* III 5.430a15-17)¹⁸³

There is a proportion between light and colors, and the agent intellect and the things that are intelligible: each of the first terms of the two relations actualizes the other; there is this difference, that light actualizes the medium, since colors are visible in act, whereas the agent intellect actualizes the understandable things themselves which are only understandable in

¹⁸² The commentary of Albert gives a further explanation of what Aquinas probably understands by 'habitus' in the sense of a form: 'Et per hunc modum in anima rationali necesse est esse has differentias ita, quod unus intellectus sit in ea, in quo omnia fiant intellecta, qui formatur et distinguitur ab intellectis, et alius sit, quo omnia intellecta facit et confert eis formas, unde movere possint intellectum possibilem. Et ille est non quidem habitus, qui sit accidens, quod non est pars animae, sed habet similitudinem habitus in hoc quod per ipsum agit anima, quando vult, et non indiget aliquo ad hoc extrinsecus perficiente vel operante, et sicut habitus de se faciens formas intelligibiles separatas, quas, prout sunt intelligibiles, non habent de se formae, prout sunt in rebus, quarum sunt formae' (*In De an.* 204). Aristotle has, in fact, given as a sign of the possession of an act, and therefore of a form that a subject can act by, when it wants (III 4.429b7-8) and 'quamlibet formam tunc aliquis in actu habet quando potest operationem illius forme explorare' (Aquinas, *In de Anima*, III 8#700).

¹⁸³ 'and there is another [intellect] which is so by producing all things, as a kind of disposition, like light, does; for in a way light too makes colours which are potential into actual colours.' Hamlyn translation

ability before being apprehended by being abstracted from sensible or individual matter. Aquinas' commentary brings out the use of the third and fourth dialectical tools to which Aristotle has recourse in carrying out his comparison:

Vnde dicit quod est habitus ut lumen, quod quodam modo facit colores existentes in potencia esse actu colores. Et dicit "quodam modo", quia supra ostensum est quod color secundum se ipsum est uisibilis, hoc autem solummodo lumen facit ipsum esse actu colorem in quantum facit dyaphanum esse in actu ut moueri possit a colore et sic color uideatur; intellectus autem agens facit ipsa intelligibilia esse in actu, que prius erant in potencia, per hoc quod abstrahit eas a materia: sic enim sunt intelligibilia in actu, ut dictum est. (*In de Anima*, III 10#730)

Aristotle takes up the nature of the agent intellect and lays down four of its characteristics:

καὶ οὗτος ὁ νοῦς χωριστὸς καὶ ἀπαθὴς καὶ ἀμιγῆς τῇ οὐσίᾳ ὧν ἐνεργεία. (*De an.* III 5.430a17-18)¹⁸⁴

He explains three of them by the fact that every agent is nobler than the patient it acts on, and every active principle more noble than its matter:

ἀεὶ γὰρ τιμιώτερον τὸ ποιοῦν τοῦ πάσχοντος καὶ ἡ ἀρχὴ ὕλης. (*De an.* III 5.430a18-19)¹⁸⁵

The fourth tool and a proportion would seem to be useful with a view to formulating the major premiss of an hypothetical syllogism whose place is that of the more and the less.¹⁸⁶ Aristotle implies this major premiss, only making explicit, in fact, the likeness that justifies the proportion it is founded upon, as well as one of the relations entering into this proportion. The agent intellect being related to the patient intellect as any agent to its patient, it follows that, if the possible intellect possess a certain degree of goodness by the fact that it is separable, impassible and uncomposed, then the agent intellect must be all this too and even more.

184 'Mind in this sense is separable, impassive and unmixed, since it is essentially an actuality;' Hett translation, modified.

185 'for the agent is always superior to the patient, and the originating cause to the matter.'

186 See *Top.* II 10.115a5-7: ἄλλος ἐνὸς περὶ δύο λεγομένου, εἰ ᾧ μᾶλλον εἰκὸς ὑπάρχειν μὴ ὑπάρχει, οὐδ' ᾧ ἥττον, καὶ εἰ ᾧ ἥττον εἰκὸς ὑπάρχειν ὑπάρχει, καὶ ᾧ μᾶλλον. The formulation of the place by Aristotle leaves us to think in fact that he is envisaging it as a form of an hypothetical syllogism. We have a beautiful illustration of the application of this place by Plato in the *Phaedo*: if the body is immortal, even more so is the soul; now, the body is immortal—the bones, at least, subsist—therefore, the soul is immortal (79e-80d).

Aristotle implies the minor premise also, which affirms the goodness of the possible intellect.¹⁸⁷

In addition to explaining Aristotle's argument by putting it hypothetically,¹⁸⁸ Aquinas uses the third and fourth tools first of all to indicate what characteristics involve a likeness between the two intellects, and then what characteristics constitute the difference that makes them distinct:

Deinde cum dicit: *Et hic intellectus*, ponit quatuor condiciones intellectus agentis, quarum prima est quod sit separabilis, secunda quod sit impassibilis, tertia quod sit inmixtus, id est non compositus ex naturis corporalibus neque adiunctus organo corporali, et in hiis tribus conuenit cum intellectu possibili; quarta autem condicio est quod sit in actu secundum suam substantiam, in quo differt ab intellectu possibili, qui est in potencia secundum suam substantiam, set est in actu solum secundum speciem susceptam. (*In de Anima*, III 10#732)

The same way of proceeding in Maurus and Rodier:

intellectus agens est separabilis, impatibilis, incorporeus et inorganicus, et in his praedicatis intellectus agens conuenit cum intellectu possibili. Differt intellectus agens ab intellectu possibili in hoc, quod intellectus possibilis est ens in potentia, cum ejus essentia consistat in hoc ipso, quod possit omnia fieri; intellectus agens est ens in actu, cum ejus essentia consistat in hoc, quod possit omnia facere. (Maurus, *In De an.* 94#3)

En somme, l'intellect en puissance a tous les caractères de celui qui agit, sauf celui d'être en acte. (Rodier 1900, 461)

Aristotle now describes the intellect in act according to three conditions. He must make use of the third tool to discover the differences between the intellect when it is only in ability—and this includes both possible and agent intellects—and the intellect when it is in act:

¹⁸⁷ 'Ajoutons que la phrase qui suit, a, 18: "ἀεὶ γὰρ.....κτλ. suppose que l'intellect en puissance est, lui aussi, séparé, impassible et sans mélange. Car la supériorité de l'agent ne peut servir à démontrer que l'agent possède certaines qualités que si le patient les possède aussi; l'agent devant, en ce cas, les posséder a fortiori' (Rodier 1900, 462).

¹⁸⁸ *In de Anima*, III 10#733. With Maurus, one also finds the idea of the more and the less: 'intellectus agens est separabilis a corpore, impatibilis, incorporeus et inorganicus, atque actu ens. Probatur; in quolibet enim genere principium activum est honorabilius ac perfectius principio passivo, quod se habet ut materia; sed intellectus possibilis, qui comparatur ad intellectum agentem sicut passivum ad suum activum, est separabilis, impatibilis, incorporeus et inorganicus (...): ergo a fortiori intellectus agens est separabilis, impatibilis, incorporeus et inorganicus' (*In De an.* 94#3).

τὸ δ' αὐτὸ ἐστὶν ἢ κατ' ἐνέργειαν ἐπιστήμη τῷ
πράγματι· (*De an.* III 5.430a19-20)¹⁸⁹

The intellect in act is the same as the thing known, whereas it is quite different for the intellect in ability. Also,

ἢ δὲ κατὰ δύνάμιν χρόνῳ προτέρα ἐν τῷ ἐνί, ὅλως δὲ οὐ
χρόνῳ· (*De an.* III 5.430a20-21)¹⁹⁰

In one and the same individual, the intellect in ability comes before the intellect in act in time, but generally it is otherwise both in nature and in time. This distinction of the two states of the intellect by the fact that they are not simultaneous corresponds to a distinction, also made by means of the third tool,¹⁹¹ in Book IX of the *Metaphysics* (7.1049b14-1050a3). Aristotle affirms there that act comes before ability in nature, but that in time and in the same individual, ability is before act because an individual is first in ability before becoming in act. But, speaking also in a universal way, act is prior in time, since what is in ability is not reduced to act otherwise than by something which is in act. Thus, understanding in ability does not become understanding in act either by discovery or by learning without some knowledge pre-existing in act. All intellectual teaching and learning proceeds, in fact, from previous knowledge (*An. post.* I 1.71a1-2).

Finally:

ἀλλ' οὐχ ὅτε μὲν νοεῖ ὅτε δ' οὐ νοεῖ. (*De an.* III 5.430a22)¹⁹²

It is false to say that the intellect in act sometimes understands, sometimes not:

Tercia condicio intellectus in actu est per quam differt ab intellectu possibili et intellectu agente, quorum uterque quandoque intelligit et quandoque non intelligit; set hoc non potest dici de intellectu in actu, qui consistit in ipso intelligere. (Aquinas, *In de Anima*, III 10#741)

The intellect in act consists in the very fact of understanding.

189 'Actual knowledge is identical with its object.'

190 'Potential is prior in time to actual knowledge in the individual, but in general it is not prior in time.'

191 This is a case where it is manifest that it is not a question of the dialectical tool alone, since the things distinguished must also be ordered, as is equally the case in the *De Anima*.

192 'Mind does not think intermittently.'

χωρισθεὶς δ' ἐστὶ μόνον τοῦθ' ὅπερ ἐστὶ, (*De an.* III 5.430a22-23)¹⁹³

According to Aquinas,¹⁹⁴ Aristotle is treating of the characteristics of the whole intellectual part of the soul here:

Dicit ergo primo quod solus intellectus separatus est hoc quod uere est. Quod quidem non potest intelligi neque de intellectu agente neque de intellectu possibili tantum, set de utroque, quia de utroque supra dixit quod est separatus;¹⁹⁵ et sic patet quod hic loquitur de tota parte intellectiua, que quidem dicitur separata ex hoc quod habet operationem sine organo corporali. (Aquinas, *In de Anima*, III 10#742)

And as Aristotle said that if some operation of the soul is proper to it, the soul will be able to be separated,¹⁹⁶ he now concludes that only this part of the soul, namely the intellectual, is incorruptible and perpetual:

καὶ τοῦτο μόνον ἀθάνατον καὶ αἰδίων (*De an.* III 5.430a23)¹⁹⁷

Again according to Aquinas, Aristotle then explains why, if the intellect is thus incorruptible, we cannot keep any memories of our present life after death:¹⁹⁸

¹⁹³ 'When it has been separated it is its true self and nothing more' Hett translation, modified.

²³⁹ This chapter has been the occasion for some celebrated debates between the schools, but this is not the place to go into the question here. (Bodéüs 1993, 229n4 calls the sentence just quoted 'l'une des plus énigmatique du *De Anima*'.) Let us only mention that, whereas Alexander identifies the active intellect with the prime mover, Averroes conceives of it as a separated substance, but inferior to God; in both cases, a transcendent intellect would be doing the thinking in us and personal human immortality would be excluded. To the contrary, Themistius and Aquinas place this intellect in the human soul, and Aquinas goes so far as to attribute to the Stagirite the doctrine of the immortality of the human soul, form of the body. See Tricot 1990, 183n1.

¹⁹⁵ On the possible intellect, see *De an.* III 4.429b5; on the agent intellect, *De an.* III 5.430a17.

¹⁹⁶ εἰ μὲν οὖν ἐστὶ τι τῶν τῆς ψυχῆς ἔργων ἢ παθημάτων ἴδιον, ἐνδέχεται ἂν αὐτὴν χωρῖσθαι (*De An.* I 2.403a10-11).

¹⁹⁷ 'and this alone is immortal and everlasting'

¹⁹⁸ This passage has led to many interpretations. See Tricot 1990, 183n1.

(οὐ μνημονεύομεν δέ, ὅτι τοῦτο μὲν ἀπαθές, ὁ δὲ παθητικὸς νοῦς φθαρτός), καὶ ἄνευ τούτου οὐθὲν νοεῖ.
(*De an.* III 5.430a23-25)¹⁹⁹

Aquinas explains that we forget because, although the intellect itself is impassible, the part of the soul that undergoes in a stricter sense is corruptible.²⁰⁰ And without this part, the intellect can understand nothing because, as will be explained, we cannot think without images (*De an.* III 6.431a16-17). Because of this, knowledge cannot remain in the separated soul in the same way. Following this interpretation, whoever seeks to understand why the separated soul does not remember what it knew when united to the body must understand that the intellective and sensitive abilities, both of which participate in the way of knowing proper to the human soul united to a body, are nonetheless distinct, since they are separated by a difference: the one is incorruptible, the other not. This distinction requires the third tool.

Aristotle now takes up the operation of the intellect. And as he had earlier indicated that we should do, he distinguishes first of all between two operations according to their objects (the complex and the simple). He affirms that one of these operations consists in the understanding of indivisibles, and this bears on things which cannot be false, both because the incomplex are neither true nor false, and because the intellect cannot be deceived about the essence:

Ἡ μὲν οὖν τῶν ἀδιαιρέτων νόησις ἐν τούτοις, περὶ ἃ οὐκ ἔστι τὸ ψεῦδος· (*De an.* III 6.430a26-27)²⁰¹

Indeed, where the true and the false come in there is already a composition of things understood:

ἐν οἷς δὲ καὶ τὸ ψεῦδος καὶ τὸ ἀληθές, σύνθεσις τις ἤδη νοημάτων ὡσπερ ἐν ὄντων, καθάπερ Ἐμπεδοκλῆς ἔφη ἢ

¹⁹⁹ '(we do not remember because, while mind in this sense cannot be acted upon, mind in the passive sense is perishable), and without this nothing thinks.'

²⁰⁰ Given the translation of the term νοῦς which has, in Greek, a much broader sense than 'intellectus' in Latin, (the word that Moerbeke used to render the text of Aristotle) Aquinas was obliged to explain why something of the sensitive soul could be called νοῦς. But in fact, by the expression νοῦς παθητικὸς, Aristotle was seeking no more than to designate the soul subject to undergoing, that is, the sensitive soul. See *De an.* III 10#744.

²⁰¹ 'The thinking of indivisible objects of thought occurs among things concerning which there can be no falsehood'. See Aquinas, *In de Anima*, III 11#746.

πολλῶν μὲν κόρσαι ἀνάχενες ἐβλάστησαν, ὧ ἔπειτα
 συντίθεσθαι τῇ φιλίᾳ,²⁰² οὕτω καὶ ταῦτα κεχωρισμένα
 συντίθεται, οἷον τὸ ἀσύμμετρον καὶ ἡ διάμετρος· (*De an.* III
 6.430a26-29)²⁰³

To help us to understand this operation of composition, Aristotle, making use of the fourth and first tools, points out its likeness to generation as conceived of by Empedocles, that friendship or love unites those things divided by hatred or strife.²⁰⁴ Although neither true nor false when taken separately and in themselves, the simple concepts together form a complex notion or a statement subject to being erroneous. Thus, the intellect is true when it puts together things that are really one or composed, as when it affirms the incommensurability of the diagonal of a square with respect to the side.²⁰⁵ It is false when it composes things which are not so in reality, as when it attributes commensurability with the side of the square to its diagonal.

A bit further on in his text, Aristotle treats more of the first operation:

Τὸ δ' ἀδιαίρετον ἐπεὶ διχῶς, ἢ δυνάμει ἢ ἐνεργείᾳ,
 οὐθὲν κωλύει νοεῖν τὸ ἀδιαίρετον, ὅταν νοῆ τὸ μῆκος
 (ἀδιαίρετον γὰρ ἐνεργείᾳ), καὶ ἐν χρόνῳ ἀδιαίρετῳ·
 ὁμοίως γὰρ ὁ χρόνος διαιρετὸς καὶ ἀδιαίρετος τῷ μήκει.
 οὐκ οὖν ἔστιν εἰπεῖν ἐν τῷ ἡμίσει τί ἐνόει ἑκατέρῳ· οὐ
 γὰρ ἔστιν, ἂν μὴ διαιρετῇ, ἀλλ' ἢ δυνάμει. (*De an.* III 6.430b6-
 11)²⁰⁶

²⁰² Diels-Krantz, I B57.

²⁰³ 'Where truth and falsehood are possible there is implied a compounding of thoughts into a fresh unity, as Empedocles said, "where without necks the heads of many grew," and then were joined together by Love, so also these separate entities are combined, as for instance "incommensurable" and "diagonal.'" See *Int.* 1.16a9; *Metaph.* VI 4.1027b18; 7.1012a2.

²⁰⁴ If it is true that this fragment of Empedocles was part of his presentation of his ideas on the formation of men and animals (see Rodier 1900, 469), Aristotle would be consulting the writings of the wise in order to judge their endoxality.

²⁰⁵ *διάμετρος* here has the meaning that Aristotle gives it most often, that of the *diagonal of the square*.

²⁰⁶ 'Since the term indivisible has two senses—potential or actual—there is nothing to prevent the mind from thinking of the indivisible when it thinks of length (which is in actuality undivided), and that in indivisible time. Time is also both divisible and indivisible in the same sense as length. So it is impossible to say what it was thinking in each half of the time; for the half has no existence, except potentially, unless the whole is divided.'

This text is difficult, but one might readily think that Aristotle is answering a tacit objection to his description of the first operation of the intellect, for if this consists in grasping what is simple or indivisible, someone could ask how, then, the intellect knows magnitudes and wholes. Now, Aristotle is not describing the object of this operation as absolutely indivisible, but as indivisible in act. This is the case for the continuum, which is one in act but many in ability, and it is as such that it is the indivisible object of one act of the intellect.

χωρὶς δ' ἑκάτερον νοῶν τῶν ἡμίσεων διαιρεῖ καὶ τὸν χρόνον ἅμα· τότε δ' οἶονεὶ μήκη. εἰ δ' ὡς ἐξ ἀμφοῖν, καὶ ἐν τῷ χρόνῳ τῷ ἐπ' ἀμφοῖν (*De an.* III 6.430b11-14)²⁰⁷

Apprehending magnitudes as divided in act would have to be due, in fact, to many consecutive acts, each of which would have simple objects, nonetheless—magnitudes which are parts of the magnitude.

Aquinas is stressing Aristotle's use of the second tool: the distinction of the senses of the word 'indivisible' (in act or in ability) commands the order of his exposition, if it is true that Aristotle shows that their multiplicity does not prevent things from being understood as indivisibles, insofar as they involve unity:

Dicitur enim uno modo aliquid unum continuitate, unde et id quod est continuum indiuisibile dicitur in quantum non est diuisum actu, licet sit diuisibile potencia. Potest ergo intellectus intelligere magnitudinem dupliciter: uno modo secundum quod est diuisibilis in potencia, et sic intelliget lineam numerando partem post partem et sic intelliget eam in tempore; alio modo secundum quod est indiuisa actu, et sic intelligit eam ut unum quid constans ex multis partibus et sic intelligit eam simul. Et ideo subiungit quod similiter tempus et longitudo diuiditur uel non diuiditur in intelligendo. (*In de Anima*, III 11#752-753)

We can also see Aristotle's use of the fourth tool: *Time is also both divisible and indivisible in the same sense as length.* Aristotle's justification of his position that the understanding of magnitude as divisible comes about in time implies, in fact, a proximity of time to magnitude.²⁰⁸

²⁰⁷ 'But by thinking each half separately, mind divides the time as well; in which case the halves are treated as separate units of length. But if the line is thought of as the sum of two halves, it is also thought of in a time which covers both half periods.'

²⁰⁸ For another example of the fourth tool, but this time conjointly with the third, see *De an.* III 6.430b14-20.

Aristotle now treats of the operation of composition.

ἔστι δ' ἢ μὲν φάσις τι κατὰ τινος, ὡσπερ ἢ κατάφασις,
καὶ ἀληθῆς ἢ ψευδῆς πᾶσα· ὁ δὲ νοῦς οὐ πᾶς, ἀλλ' ὁ
τοῦ τί ἐστι κατὰ τὸ τί ἦν εἶναι ἀληθῆς, καὶ οὐ τὶ κατὰ
τινος· (*De an.* III 6.430b26-29)²⁰⁹

Thought is not always able to lead to truth and error. That discourse by which the intellect predicates an attribute of a subject (an affirmation, for example) is always either true or false, something that is not the case for the thing understood. The intellect, as we saw, has for its object the incomplex things thought. Now, truth and falsity only follow upon complex expressions, which come about when the intellect composes or divides, but not when the intellect simply seizes the incomplex. The intellect is infallible when its operation is limited to seizing the essential characteristics which constitute a given notion:²¹⁰

et ideo subdit quod intellectus qui est ipsius quid est secundum hoc quod
aliquid erat esse, id est secundum quod intelligit quid est res, uerus est
semper, et non secundum quod intelligit aliquid de aliquo. (Aquinas, *In de
Anima*, III 11#760)

The essence is indeed the proper object of the intellect. Aristotle is making use of the fourth tool to set up a proportion: the eye is to color as the intellect is to the essence, and this then enters into the major premise of an hypothetical syllogism aimed at making known the intellect's operation in respect to its proper object by means of the more known operation of the sense in respect to its proper object:

ἀλλ' ὡσπερ τὸ ὁρᾶν τοῦ ἰδίου ἀληθές, εἰ δ' ἄνθρωπος
τὸ λευκὸν ἢ μὴ, οὐκ ἀληθές αἰεί, οὕτως ἔχει ὅσα ἀνευ
ύλης. (*De an.* III 6.430b29-30)²¹¹

If the eye is not deceived as to color, but only as to those things which accompany it, the intellect is not deceived as to the essence, but only in respect to what accompanies it. Now, the

²⁰⁹ 'Assertion, like affirmation, states an attribute of a subject, and is always either true or false; but this is not always so with the mind: the thinking of the definition in the sense of the essence is always true and is not an instance of predication'

²¹⁰ Thus, as the enunciation is always true or false, the intellect which adheres to it is always in truth or error. But as the intelligible itself is neither true nor false, the intellect that seeks to understand this intelligible either seizes it or does not.

²¹¹ 'But just as while the seeing of a proper object is always true, the judgement whether the white object is a man or not is not always true, so it is with every object without matter'. Hett translation, modified.

eye is not deceived as to color, such as about white, but only as to what happens to white, such as what its subject is. Therefore, the intellect is not deceived by the essence it seizes, but only as to what accompanies it, such as when it formulates an impossible definition or when it attributes a definition to something to which that essence, correctly understood, does not belong. Albert and Aquinas put the argument in hypothetical form:

Et huius rationem assignat quia quod quid est est proprium obiectum intellectus, unde, sicut uisus nunquam decipitur in proprio obiecto, ita nec intellectus in cognoscendo quod quid est, unde intellectus nunquam decipitur in cognoscendo quod quid est homo; set, sicut uisus non semper uerus est in iudicando de hiis que sunt adiuncta proprio obiecto, puta si album est homo uel non, sic nec intellectus semper est uerus in componendo aliquid alicui. (Aquinas, *In de Anima*, III 11#760)²¹²

²¹² See Albert, *In De an.* 210.

A COMPARISON OF THE INTELLECT TO THE SENSES

After having reiterated certain of the essential points already mentioned,²¹³ Aristotle reminds us of what he said in Chapter 12 of Book II, namely, that sensation is not a 'passion' nor a 'movement' in the proper sense of these words. He says, in effect, that the sensible is what actualizes the sensitive part, that is, what reduces it from ability to act:

φαίνεται δὲ τὸ μὲν αἰσθητὸν ἐκ δυνάμει ὄντος τοῦ αἰσθητικοῦ ἐνεργείᾳ ποιοῦν. (*De an.* III 7.431a4-5)²¹⁴

Whence it follows that the sense neither undergoes, nor is altered, strictly speaking, by the sensible; there is no contrariety between the sensible and the sense.

οὐ γὰρ πάσχει οὐδ' ἀλλοιοῦται. (*De an.* III 7.431a5)²¹⁵

Motion, as treated in the *Physics* is from one contrary to another, and thus, if one treats sensation as a 'motion', one must see that it is another sort of act involved here:

διὸ ἄλλο εἶδος τοῦτο κινήσεως· ἡ γὰρ κίνησις τοῦ ἀτελοῦς ἐνεργείᾳ ἦν, ἡ δ' ἀπλῶς ἐνεργείᾳ ἑτέρα ἢ τοῦ τετελεσμένου. (*De an.* III 7.431a6-7)²¹⁶

Thus, the third tool is being used—Aristotle's words are significant—to find the difference between the two kinds of act: one is the act of what is in ability as such, the other, of what is already in act.

quia, ut dictum est lib. II, sensitivum, dum sentit, proprie non patitur nec alteratur a sensibili, sed pure perficitur ac actuatur, ideo motus, quo sensitivum movetur ad sentiendum, est alia species motus, ac qui definitus fuit lib. III Physicorum. Explicatur; motus, qui definitus fuit lib. III

213 τὸ δ' αὐτὸ ἐστὶν ἢ κατ' ἐνεργείαν ἐπιστήμη τῷ πράγματι. ἡ δὲ κατὰ δύνάμιν χρόνῳ προτέρα ἐν τῷ ἐνί, ὅλως δὲ οὐδὲ χρόνῳ· ἔστι γὰρ ἐξ ἐντελεχείᾳ ὄντος πάντα τὰ γιγνόμενα (*De an.* III 5.430a19-21).

214 'And clearly the sensible object makes the sense-faculty actually operative from being only potential'

215 'It is not acted upon, nor does it undergo change of state'. 'Il est clair que le rôle du sensible se borne à faire passer le sensitif de l'état de faculté à celui d'activité; car le sensitif ne pâtit pas sous son influence' (Rodier 1900, 492).

216 'and so, if it is motion, it is motion of a distinct kind; for motion, as we saw, is an activity of the imperfect but activity in the absolute sense, that is activity of the perfected, is different.'

Physicorum, est actus entis in potentia, quia subjectum dum tali motu movetur, adhuc ordinatur ad ulteriorem motum; sed sensus, dum sentit, jam est in actu perfecto nec per sensationem ordinatur ad ulteriorem actum: ergo motus, quo sensus movetur, est diversae rationis ac speciei a motu definito lib. III Physicorum; ideoque cum motus, qui definitur lib. III Physicorum, sit actus entis imperfecti, motus, quo sensus movetur, est actus entis perfecti. (Maurus, *In De an.* 93#1)²¹⁷

One of these is, therefore, the act of something imperfect, and the other, of what is perfect. We have thus another example of the complementary use of the third and fourth tools. It is necessary to distinguish the two things because they are manifestly alike, but also to consider their likeness in order to understand why one names things in this way, which allows us to distinguish things named by the same word and, thus, to more easily use the second tool. Having distinguished the act of what is imperfect from the act of what is perfect, Aristotle is, in fact, led to make clear that, even if there are two acts, it is the latter which is called 'motion' (κίνησις) in the strict sense, whereas the other is more properly called an 'operation' (ἐνέργεια).²¹⁸

Having seen the differences between two things by explaining what they are, one is better able to judge rightly of the true likenesses between them which before led to confusing them. We just saw an example with motion and operation. But much more crucial to our understanding of Aristotle's project is to see that this way of proceeding is now to be applied to the intellect and the senses, for after having shown that sensation is not understanding, and having explained in what these two knowing processes consist, he then shows how the movement of the intellect is like that of the sense.

By the fourth tool, and what has been said up to now, one can first conclude that sensation resembles understanding in this, that neither the one nor the other is a passion in the strict sense:

²¹⁷ See also Albert, *In De an.* 211.

²¹⁸ 431a6-7. We will find the same distinction, thanks to the third and second tools, in *Metaphysics IX* 6.1048b15: Aristotle is distinguishing imperfect act, which he called 'κίνησις', from perfect act, called 'ἐνέργεια'. The difference is that in the *Metaphysics*, Aristotle gives as a distinction that operation has an immanent end, whereas motion tends toward an end exterior to the mobile. We notice that it is from this difference that the one in the *De Anima* follows: it is, indeed, because the end is immanent or not to the subject which is said to move, that it is called perfect or imperfect, in act or in ability to that towards which it is moving.

τὸ μὲν οὖν αἰσθάνεσθαι ὅμοιον τῷ φάναι²¹⁹ μόνον καὶ νοεῖν· (*De An.* III 7.431a8)²²⁰

Furthermore, sensation itself, that is to say, the apprehension and the judgment of the sense, is similar to the first operation of the intellect, namely, to simple apprehension:

Dicit ergo primo quod, cum sensibile reducat in actum sensitivum sine passione et alteratione, sicut et de intellectu supra dictum est, manifestum est ex dictis quod ipsum sentire est simile ei quod est intelligere, ita tamen quod quando est solum sentire, id est apprehendere et iudicare secundum sensum, hoc est simile ei quod est solum dicere et intelligere, quando scilicet intellectus tantum iudicat aliquid et apprehendit, quod est dicere quod simplex apprehensio et iudicium sensus assimilatur speculationi intellectus; (*Aquinas, In de Anima*, III 12#767)

Actus igitur, quo sensus percipit suum objectum proprium, habet similitudinem cum actu, quo intellectus intellectione simplici dicit, quid sit res. Sicut enim intellectus intellectione simplici dicit, id quod intelligit esse id quod est, sic visus videndo album dicit quodammodo, id quod videt esse album; auditus audiendo sonum acutum aut gravem, dicit quodammodo, sonum quem audit esse acutum aut gravem, tactus dicit, ea quae tangit esse calida vel frigida. (*Maurus, In De an.* 98#2)

L'opération qui consiste à saisir les sensibles propres ressemble à l'intellection de la quiddité d'une notion. Il y a, dans les deux cas, une intuition indivisible et infaillible. (Rodier 1900, 492)

La sensation pure et simple est comparée à la simple conception de la pensée: il n'y a alors ni affirmation, ni négation. (Tricot 1990, 190n4)

Many commentators thus clearly indicate the use of the fourth tool here. But the pleasure or pain that follow upon sensation are comparable to the second operation of the intellect:

ὅταν δὲ ἡδὺ ἢ λυπηρόν, οἷον καταφᾶσα ἢ ἀποφᾶσα, διώκει ἢ φεύγει· καὶ ἔστι τὸ ἡδεσθαι καὶ λυπεῖσθαι τὸ ἐνεργεῖν τῇ αἰσθητικῇ μεσότητι πρὸς τὸ ἀγαθὸν ἢ κακόν, ἢ τοιαῦτα. καὶ ἡ φυγὴ δὲ καὶ ἡ ὄρεξις τοῦτο ἢ κατ' ἐνέργειαν, (*De an.* III 7.431a9-12)²²¹

²¹⁹ φάναι, au sens strict, c'est-à-dire 'énoncer un terme isolé' ou 'poser une notion indivisible sans la mettre en rapport avec une autre' (Rodier 1900, 492).

²²⁰ 'Sensation, thus, is like mere assertion and thinking' Hett translation, modified.

²²¹ 'when an object is pleasant or unpleasant, the soul pursues or avoids it, thereby making a sort of assertion or negation. To feel pleasure or pain is to adopt an attitude with the sensitive mean towards good or bad as such. This is what avoidance or appetite, when actual, really means'

Thus, pleasure or pain that follow the sensations are similar to the affirmation and negation:

set quando sensus sentit aliquid delectabile aut triste quasi affirmans aut negans id quod sensu percipitur esse delectabile aut triste, tunc prosequitur per appetitum, id est desiderat, aut fugit (et dicit signanter: "ut affirmans aut negans", quia formare affirmationem et negationem est proprium intellectus, ut supra dictum est, set sensus facit aliquid simile huic quando apprehendit aliquid ut delectabile uel triste). (Aquinas, *In de Anima*, III 12#767)

We are dealing with a proportion: the passion following upon sense, its reaction to the apprehension of good or evil, is a bit like the enunciation of the intellect which follows the apprehension of terms. The sense enjoys or suffers as the intellect affirms or denies:

Aristotle also assimilates finding something pleasant to asserting it as good; contrariwise for what is painful. (Hamlyn 1993, 145)²²²

It thus appears that the movement of the sense involves three steps: the apprehension of the sensible as suitable or as harmful; then this apprehension is followed by pleasure or pain; these are then followed by either desire or aversion. Although desiring and averting and sensing are diverse acts, their principle is the same in subject: and this is what Aristotle wants to say with his remark that the appetite and aversion are not other in subject, no more than that they are other than the sensitive part, but that their *essence* is other; that is to say that they differ in notion:

καὶ οὐχ ἕτερον τὸ ὀρεκτικὸν καὶ φευκτικόν, οὔτ' ἀλλήλων οὔτε τοῦ αἰσθητικοῦ· ἀλλὰ τὸ εἶναι ἄλλο. (*De an.* III 7.43112-14)²²³

²²² This is how Aquinas, Maurus and Hamlyn interpret the text. But others think that the proportion is between the desire and aversion following upon the sensations of pleasure and pain, and the affirmation and negation of the intellect. They think the intellect affirms and denies just as the sense appetite desires and flees. See Rodier 1900, 492: 'Ce que sont, dans l'ordre de la pensée, l'affirmation et la négation, la recherche et la fuite le sont dans l'ordre de la connaissance sensible.' See also Tricot 1990, 190n4: 'Mais si cette perception s'accompagne de plaisir ou de douleur, la recherche ou la fuite de l'objet sensible par l'âme est une sorte d'affirmation ou de négation.' In the *Nicomachean Ethics* VI 2.1139a21, it is indeed this proportion that is to be found: ἔστι δ' ὡσπερ ἐν διανοίᾳ κατάφασις καὶ ἀπόφασις, τοῦτ' ἐν ὀρέξει δίωξις καὶ φυγή. Nonetheless, the first interpretation seems to me the better, as the following passage confirms (431a14-17), a passage in which Aristotle compares three stages in the movement of the intellect to the three stages in the movement of the sense; in that case, affirmation and negation are found in the same place as pleasure and pain, and it is a pursuit and aversion of the intellect that corresponds to those of the sense. See also *De an.* III 7.431b8-9.

²²³ 'and the faculties of appetite or avoidance are not really different from each other, or from the sensitive faculty, though their actual essence is different.'

This is a use of the third and fourth tools which is certainly ordered to refuting Plato, who placed the organs of sensation and those of appetite in different parts of the body:

potest quaeri, quo pacto differant pars sensitiva et pars appetitiva: subjectione, eo quod in diversa parte corporis resideat virtus sensitiva, in diversa resideat virtus appetitiva, ut opinatus est Plato; an potius differant sola ratione. Dicendum quod non differunt subjecto, sed sola ratione et secundum esse; adeoque licet in eadem parte corporis sit virtus sensitiva ac virtus appetitiva, adhuc aliud est virtus appetitiva, aliud est virtus sensitiva. (Maurus, *In De an.* 98#4)

Aristotle next shows that there is something like the three stages of the movement of the senses in the case of the intellect also:

τῇ δὲ διανοητικῇ ψυχῇ τὰ φαντάσματα οἷον αἰσθήματα ὑπάρχει. ὅταν δὲ ἀγαθὸν ἢ κακὸν φήσῃ ἢ ἀποφήσῃ, φεύγει ἢ διώκει. διὸ οὐδέποτε νοεῖ ἄνευ φαντάσματος ἢ ψυχῆ, (*De an.* III 7.431a14-17)²²⁴

He makes use of the fourth tool to set up a proportion: the phantasms move the intellect as the sensibles move the sense; and, just as the latter pursues or flees what it apprehends as pleasant or disagreeable, in the same way the intellect seeks out or avoids what it apprehends as good or bad. The syllogism, of which only the conclusion is explicit, is hypothetical: if the senses cannot sense without the sensible, so too, the intellect cannot understand without the phantasms. Now, the senses cannot sense without the sensible; therefore, the intellect cannot understand without the phantasms, Aristotle implies. Once again, many commentators stress both the use of the fourth tool;²²⁵ and the hypothetical form of the argument.²²⁶

Even if his use of the third tool is more subtle, attention to Aristotle's way of speaking reveals that once again he is using the fourth tool in conjunction with the third, as Aquinas notes:

Ex ipso autem modo loquendi Aristotilis, attendenda est duplex differentia inter sensum et intellectum, (*In de Anima*, III 12#771)

²²⁴ 'Now for the thinking soul images take the place of direct perceptions; and when it asserts or denies that they are good or bad, it avoids or pursues them. Hence the soul never thinks without a mental image.'

²²⁵ Albert, *In De an.* 212.

²²⁶ Aquinas, *In de Anima*, III 12#770-772; Maurus, *In De an.* 99#5.

We said previously that sensation involved three stages: the apprehension of the good or of the evil was followed by pleasure or pain before giving way to desire or aversion. Now, the intellect seeks out or avoids without its apprehension of a good or bad object giving way to these passions of pleasure and pain, and this is so because, whereas the sense apprehends a determinate good and the sense appetite pursues this good, the intellect apprehends a universal good or evil. Whence, the intellectual appetite is moved immediately. Moreover, whereas we can say that the intellect affirms and denies, we can only say the sense acts as if it were affirming or denying, as Aristotle says in 7.431a9.²²⁷ Maurus explains very clearly in what consists one of the differences picked out by Aquinas:

differentia est, quod sensus eo ipso, quod apprehendit objectum ut delectabile vel doloriferum, dolet aut delectatur, et consequenter prosequitur aut fugit. Ratio est, quia sensus apprehendit solum objectum ut praesens; sed ex apprehensione objecti delectabilis ut praesentis sequitur delectatio, ex apprehensione objecti molesti ut praesentis sequitur dolor: ergo cum sensus apprehendit objectum delectabile vel doloriferum, delectatur aut dolet; intellectus e converso non eo ipso, quod judicat objectum esse bonum vel malum, delectatur aut tristatur, quia potest judicare objectum esse bonum aut malum, abstrahendo ab hoc, quod sit praesens vel absens; sed ex bono et malo, abstrahendo a praesentia vel absentia, sequitur quidem prosecutio vel fuga, sed non sequitur delectatio vel dolor. (Maurus, *In De an.* 99#5)²²⁸

In certain passages which have been the source of very diverse interpretations (Rodier 1900, 501 goes so far as to say that their obscurity is well-known), Aristotle explains the likenesses which establish the proportion on which reposes the major premise of his last syllogism, and first of all, that the phantasms are to the intellect as the sensibles are to the sense. He stresses that insofar as they are moved by their objects, both the intellect and the sense are one:

ὡσπερ δὲ ὁ ἀὴρ τὴν κόρην τοιανδὶ ἐποίησεν, αὐτὴ δ' ἕτερον, καὶ ἡ ἀκοὴ ὡσαύτως· τὸ δὲ ἔσχατον ἓν, καὶ μία μεσότης· τὸ δ' εἶναι αὐτῇ πλεῖω. (*De an.* III 7.431a17-20)²²⁹

²²⁷ See Aquinas, *In de Anima*, III 12#771.

²²⁸ See Rodier 1900, 497: 'Lorsque l'âme dianoétique aperçoit, non plus, comme la sensibilité, l'agréable ou le pénible, mais les concepts du bon ou du mauvais, de l'utile ou du nuisible, dans l'image de l'objet qu'elle saisit, et qu'elle affirme ou qu'elle nie ces qualités de cet objet, elle le fuit ou le recherche.'

²²⁹ 'The process is just like that in which air affects the eye in a particular way, and the eye again affects something else; and similarly with hearing. The last thing to be affected is a single entity and a single mean, although it has more than one aspect.'

Thus, the intellect is like the common sense which is one in subject, but many in notion, insofar as it is the term of many kinds of sensation:

Dicit ergo primo quod aer inmutatus a colore facit pupillam huiusmodi, id est facit eam aliqualem, inprimens in eam speciem coloris, et ipsa, scilicet pupilla sic inmutata, inmutat alterum, scilicet sensus communem, et similiter auditus inmutatus ab aere inmutat sensum communem; et licet sensus exteriores sint plures, tamen ultimum, ad quod terminantur inmutaciones horum sensuum, est unum et est quasi medietas una inter omnes sensus,... et nunc etiam dicendum est de ipso per comparisonem ad intellectum, quia est aliquid unum respectu omnium sensibilibium sicut, inquam, terminus. (Aquinas, *In de Anima*, III 12#773-774)

Making use of the fourth tool, Aristotle indeed describes the common sense as a limit, ὡς ὅρος:

Τίτι δ' ἐπικρίνει τί διαφέρει γλυκὺ καὶ θερμόν, εἴρηται μὲν καὶ πρότερον,²³⁰ λεκτέον δὲ καὶ ὧδε. ἔστι γὰρ ἓν τι, οὕτω δὲ καὶ ὡς ὅρος. καὶ ταῦτα ἓν τῷ ἀνάλογον καὶ τῷ ἀριθμῷ ὃν ἔχει πρὸς ἑκάτερον ὡς ἐκεῖνα πρὸς ἄλληλα. (De an. III 7.431a20-24)²³¹

The sensibles perceived by the common sense are many in notion, but are nonetheless one by analogy, Aristotle adds. All the sensibles are indeed related in the same way to the sense of which they are the proper object.²³² They are also one in number, to the degree that they exist in the same subject, since they are ultimately known by the common sense. Moreover, they are to one another as the objects of the intellect are to one another: whence, one could conclude that the phantasms are, in like manner, one by analogy and in number. And Aristotle proceeds to justify that the sensibles are one by analogy and in number:

τί γὰρ διαφέρει τὸ ἀπορεῖν πῶς τὰ μὴ ὁμογενῆ κρίνει ἢ τὰναντία, οἷον λευκὸν καὶ μέλαν; (De an. III 7.431a24-25)²³³

²³⁰ De an. III 2

²³¹ 'We have explained before what part of the soul distinguishes between sweet and hot,²³¹ but some further details must now be added. It is one thing, but it is so as a boundary is, and these things, being one by analogy and number, are each to each as those are to each other'. Hett translation, slightly modified.

²³² 'It seems fairly clear that "these things" must be the sweet and the hot. These are one (a) by analogy, i.e. in their relations to the corresponding unified senses' (Hamlyn 1993, 147)

²³³ 'for what difference does it make to ask how one judges those things which are not of the same kind or those which are opposites, like white and black?' Hamlyn translation

Indeed, it makes no difference to judge of sensibles of different genera or of the same genus, since, as we saw, sensible objects are related in the same way to the sense of which they are the proper object and they are all finally judged by the common sense. Aristotle makes explicit the unity in subject (i.e., the knowing subject) of the sensibles, as well as the conclusion that he draws from it about the phantasms:

ἔστω δὴ ὡς τὸ Α τὸ λευκὸν πρὸς τὸ Β τὸ μέλαν, τὸ Γ πρὸς τὸ Δ [ὡς ἐκεῖνα πρὸς ἄλληλα]. ὥστε καὶ ἐναλλάξ. εἰ δὴ τὰ ΓΔ ἐνὶ εἴῃ ὑπάρχοντα, οὕτως ἔξει ὥσπερ καὶ τὰ ΑΒ τὸ αὐτὸ μὲν καὶ ἓν τὸ δ' εἶναι οὐ τὸ αὐτό, ἀλλὰ ὁμοίως. ὁ δ' αὐτὸς λόγος καὶ εἰ τὸ μὲν Α τὸ γλυκὺ εἴῃ, τὸ δὲ Β τὸ λευκόν. (*De an.* III 7.431a25-b1)²³⁴

The relation between two sensibles is the same as that between the two images they bring about. Thus, white (A) is to black (B) as the image of white (C) is to that of black (D). If, therefore, white and black are, as was said, one in subject, although two in notion, it will be the same thing for the two images in question. They will be one in subject, known by the same intellect, but will differ in notion. And it will be the same thing when it is a question of sensibles belonging to different genera and of their images.²³⁵

Aristotle made use of the fourth tool to establish a proportion between the relation of the two sensibles and that of the two images, then he reasoned hypothetically: if white and black are one in subject because perceived by the common sense, but many in notion to the degree that they are the objects of diverse sensations, likewise their images will be one in subject and

²³⁴ 'Suppose that as A (white) is to B (black), so is C to D. Then alternando C is to A as D is to B. If then C and D belong to one subject, they will stand in the same relation as A and B; A and B are one and the same, though their being has different aspects, and so it is with C and D. The same also holds good if we take A as sweet and B as white.'

²³⁵ 'Accipiamus ergo A loco albi et B loco nigri, ut sic se habeat A album ad B nigrum sicut G ad D, id est sicut fantasma albi ad fantasma nigri; quare et secundum permutatam proportionem A se habet ad G sicut B ad D, id est album ad fantasma albi sicut nigrum ad fantasma nigri; et sic ita se habet intellectus ad G et D, scilicet ad fantasmata albi et nigri, sicut se habet sensus ad A et B, id est ad album et nigrum. Si igitur GD, id est fantasmata albi et nigri, sunt existenciam uni, id est diiudicantur ab uno intellectu, sic se habebunt sicut et AB, id est album et nigrum que iudicabuntur ab uno sensu, ita quod sensus diiudicans hec duo erat unum subiecto, differens ratione, ita erit de intellectu. Et eadem ratio est si accipiamus non homogenea, ut scilicet A sit dulce et B sit album' (Aquinas, *In de Anima*, III 12#776).

perceived by one intellect, even if they are diverse in notion. We therefore used the sense to make known the intellect.²³⁶

Aristotle now manifests the other likeness between the relation sense, sensibles, and the relation intellect, images. He said indeed that the intellect, like the sense, flees or pursues what it apprehends as bad or good.²³⁷ Since the intellect abstracts the universal (including the notions of good and evil) starting from the phantasms, as it is moved by the sensibles, likewise, it is sometimes moved by the phantasms alone:

Τὰ μὲν οὖν εἶδη τὸ νοητικὸν ἐν τοῖς φαντάσμασι νοεῖ,
καὶ ὡς ἐν ἐκείνοις ὄρισται αὐτῷ τὸ διωκτὸν καὶ
φευκτὸν, καὶ ἔκτος τῆς αἰσθήσεως, ὅταν ἐπὶ τῶν
φαντασμάτων ἦ, κινεῖται, (*De an.* III 7.431b2-5)²³⁸

Aristotle gives examples for each of these cases:²³⁹

οἶον αἰσθανόμενος τὸν φρυκτὸν ὅτι πῦρ, τῇ κοινῇ
γνωρίζει, ὄρων κινούμενον, ὅτι πολέμιος. (*De an.* III 7.431b5-
6)²⁴⁰

Thus, the intellect is sometimes moved to flee in the presence of some sensible thing. But, sometimes, considering the images of the sensibles, the intellect deliberates on future actions and, judging that something is harmful, it seeks to avoid it, and does so in the same way as when it is moved by the presence of the sensible:

ὅτε δὲ τοῖς ἐν τῇ ψυχῇ φαντάσμασιν ἢ νοήμασιν ὥσπερ
ὄρων λογίζεται καὶ βουλεύεται τὰ μέλλοντα πρὸς τὰ

²³⁶ 'Sed adhuc magis explicandum est, quo pacto procedat motus, quo sensus movetur a sensibili, ut pateat deinde, quo pacto procedat motus, quo intellectus movetur a phantasmate' (Maurus, *In De an.* 99#6).

²³⁷ 'Aristotle now returns to the issues left off at 421a17' (Hamlyn 1993, 148).

²³⁸ 'So the thinking faculty thinks the forms in mental images, and just as in the sphere of sense what is to be pursued and avoided is defined for it, so also outside sensation, when it is occupied with mental images, [it] is moved.'

²³⁹ 'The example of the beacon is not meant to illustrate the function of images but to provide a case to illustrate the role of perception in initiating actions (...); this is to be compared with the role of images which is referred to next' (Hamlyn 1993, 148).

²⁴⁰ 'For instance in perceiving a beacon a man recognizes that it is fire; then seeing it moving he knows that it signifies an enemy.'

παρόντα· καὶ ὅταν εἶπη ὡς ἐκεῖ τὸ ἡδὺ ἢ λυπηρόν,
ἐνταῦθα φεύγει ἢ διώκει, (*De an.* III 7.431b6-9)²⁴¹

Aristotle is therefore using the fourth tool to underline that the intellect moves in the same way, whether it is moved by the presence of sensible things or by their images when they are absent. The reason for this is obviously that the images are the representations of the sensible things:

Uno verbo, proportionaliter intellectus movetur ad actiones ab objectis absentibus per phantasmata repraesentatis, sicut movetur ab objectis praesentibus per sensum repraesentatis. (Maurus, *In De an.* 100#9)

Finally, Aristotle proceeds to compare this movement of the intellect, which is also like that of the sense insofar as it emanates from the practical intellect or the theoretical one. By means of the fourth tool he affirms first of all that, just as the practical intellect flees or pursues what it apprehends as good or evil, in the same way the theoretical intellect tends towards the true and repels the false:

καὶ ὅλως ἐν πράξει. καὶ τὸ ἄνευ δὲ πράξεως, τὸ ἀληθὲς
καὶ τὸ ψεῦδος ἐν τῷ αὐτῷ γένει ἐστὶ τῷ ἀγαθῷ καὶ
κακῷ· (*De an.* III 7.431b10-11)²⁴²

Aristotle then underlines the difference:

ἀλλὰ τῷ γε ἀπλῶς διαφέρει καὶ τινί. (*De an.* III 7.431b12)²⁴³

241 'But sometimes by means of the images or thoughts in the soul, just as if it were seeing, it calculates and plans for the future in view of the present; and when it makes a statement, as in sensation it asserts that an object is pleasant or unpleasant, in this case it avoids or pursues'. See Maurus, *In De an.* 100#8: 'Ex. gr. videns quis facem et dijudicans illam esse hostilem, adeoque hostem appropinquare, movetur ad fugiendum. Proportionaliter intellectus nihil sentiens, sed solum excitatis phantasmatis consultans de objectis, ac si essent praesentia, statuit esse fugiendum vel prosequendum et sic movetur ad prosecutionem aut fugam, ac si vere esset praesens aliquid jucundum vel molestum.'

242 'and so generally in action. What does not involve action, *i.e.*, the true or false, belongs to the same sphere as what is good or evil'

243 'but they differ in having respectively a universal and a particular reference.' See Maurus, *In De an.* 100#9: 'Verum porro et falsum, quae sunt objectum intellectus speculativi, ejusdem generis sunt ac bonum et malum, quae sunt objectum intellectus practici, ac differunt solum in hoc, quod bonum et malum considerantur applicando illa actionibus particularibus, verum et falsum considerantur simpliciter.' Tricot 1990, 195n1 goes along with this: 'L'intellect pratique n'est pas entièrement indépendant de l'intellect théorique: le vrai et le faux rentrent dans le même genre que le bon et le mauvais, sont rangés dans la même συστοιχία.—Pour apercevoir la liaison des idées, il faut faire précéder cette phrase de l'explication sous-entendue suivante: 'Tel est donc l'intellect pratique. Il a pour objet le bon et le mauvais, tandis que l'intellect théorique a pour objet le

Then, having considered the likenesses between the sensible and the intellectual knowledge of material and sensible things, and having affirmed that the soul understands nothing without images (*De an.* III 7.431a16-17), Aristotle shows how our intellect can know the non-sensible substances and, first of all, the mathematical objects.²⁴⁴ As Aquinas explains (*In de Anima*, III 12#782), the intellect abstracts the natures of these things which exist in sensible matter, but in the definition of which this matter does not enter. Not in the sense that it understands them as immaterial, but simply that it does not consider the sensible matter in which they exist:

τὰ δὲ ἐν ἀφαιρέσει λεγόμενα ὡσπερ, εἰ <τις> τὸ σιμόν ἦ μὲν σιμόν οὐ, κεχωρισμένως δὲ ἦ κοῖλον [εἴ τις] ἐνόει ἐνεργεία, ἄνευ τῆς σαρκὸς ἂν ἐνόει ἐν ἡ τὸ κοῖλον. (*De an.* III 7.431b12-15)²⁴⁵

Thus, the intellect does not understand snub-nosed as snub-nosed without sensible matter, since this matter falls into its definition; but when it understands snub-nosed simply as curved, it understands it without the matter, i.e., without the nose of flesh in which this curve exists, but without affirming nonetheless that this curve is not in this matter. Since flesh is not in the definition of curve, the intellect simply understands it without this matter. And the same is true of all mathematical things:

οὕτω τὰ μαθηματικά, οὐ κεχωρισμένα <όντα>, ὡς κεχωρισμένα νοεῖ, ὅταν νοῖ <ἡ> ἐκεῖνα. (*De an.* III 7.431b15-17)²⁴⁶

vrai et le faux (...) La différence signalée *in fine*, c'est que le vrai est absolu, tandis que le bien est relatif à quelqu'un ou à quelque chose.' From Aquinas' interpretation, I retain only this clarification of the difference: 'intellectus speculatiuus considerat aliquod uerum uel falsum in uniuersali, quod est considerare simpliciter, intellectus autem practicus applicando ad particulare operabile, quia operatio in particularibus est' (*In de Anima*, III 12#780).

²⁴⁴ In the comparison of intellect and sense that Aristotle has been undertaking up to now in Chapter 7, he has been examining likenesses between the two faculties, but without confusing them, because he has also been noting the differences between the aspects brought together by the likenesses. Now he will necessarily be examining only differences. For, objects that are not sensible are not per se objects of sense.

²⁴⁵ 'Abstract objects, as they are called, the mind thinks as if it were thinking the snub-nosed; *qua* snub-nosed, it would not be thought of apart from flesh, but *qua* hollow, if it were actually so conceived, it would be thought of apart from the flesh in which the hollowness resides.'

²⁴⁶ 'So when mind thinks the objects of mathematics, it thinks them as separable though actually they are not.'

Things are thus seized by the intellect as they *are*—in the strong sense of essence—that is to say, that the intellect takes account of the sensible matter which is part or not of their *being*. The fourth tool is probably useful for considering what is common between the intellect in act and its object, which are nonetheless clearly distinct: it is the essence of the object:

ὅλως δὲ ὁ νοῦς ἐστὶν ὁ κατ' ἐνέργειαν τὰ πράγματα
νοῶν. (*De an.* III 7.431b17)²⁴⁷

Aristotle concludes the chapter saying that it would be necessary to ask whether our intellect, as something not separated from matter (it is a faculty of the human soul, which is the act of the body)²⁴⁸ can understand those substances which are totally separated from matter:

ἄρα δ' ἐνδέχεται τῶν κεχωρισμένων τι νοεῖν ὄντα αὐτὸν
μὴ κεχωρισμένον μεγέθους, ἢ οὐ, σκεπτέον ὕστερον. (*De
an.* III 7.431b17-19)²⁴⁹

But this question belongs to metaphysics, since it is not manifest to the psychologist that separated substances exist.²⁵⁰

Aristotle now makes use of what he determined about the sense and the intellect to further clarify the nature of the soul. He starts by showing that it is, in a certain way, as the Ancients described it, and in another way, that it is not.

Νῦν δὲ περὶ ψυχῆς τὰ λεχθέντα συγκεφαλαιώσαντες,
εἴπωμεν πάλιν ὅτι ἡ ψυχὴ τὰ ὄντα πῶς ἐστὶ πάντα. (*De
an.* III 8.431b20-21)²⁵¹

Indeed, in a certain way, it is true to say that the soul is all things, as the Ancients said, for:

²⁴⁷ 'In general, the mind when actively thinking is identical with its objects.' As the object of the intellect is universal, it will never retain any singular aspect, but, as we saw, it will retain universal sensible matter or not, depending on whether it is a question of natural things or of mathematical ones.

²⁴⁸ When Aristotle said it was separate in III 1.429b5; 4.430a17, we must understand that this was insofar as it operated without a bodily organ.

²⁴⁹ 'Whether it is possible for the mind to think of unextended objects when it is not itself unextended, must be considered later.'

²⁵⁰ This is something that is established, however, in Books VII and VIII of the *Physics*.

²⁵¹ 'Now summing up what we have said about the soul, let us assert once more that in a sense the soul is all existing things.'

ἢ γὰρ αἰσθητὰ τὰ ὄντα ἢ νοητά, ἔστι δ' ἡ ἐπιστήμη μὲν τὰ ἐπιστητά πῶς, ἢ δ' αἴσθησις τὰ αἰσθητά. (*De an.* III 8.431b20-21)²⁵²

Everything that is, is indeed either sensible or intelligible. Now—here the fourth tool comes into play—the soul is, in a certain way, the sensible and intelligible things, since the sense is in a certain way the sensible and the intellect the intelligibles or intellectual knowledge, the knowables. Making use of the third tool, he explains:

πῶς δὲ τοῦτο, δεῖ ζητεῖν. τέμνεται οὖν ἡ ἐπιστήμη καὶ ἡ αἴσθησις εἰς τὰ πράγματα, ἡ μὲν δυνάμει εἰς τὰ δυνάμει, ἢ δ' ἐντελεχείᾳ εἰς τὰ ἐντελεχείᾳ. τῆς δὲ ψυχῆς τὸ αἰσθητικὸν καὶ τὸ ἐπιστημονικὸν δυνάμει ταῦτα ἔστι, τὸ μὲν ἐπιστητὸν τὸ δὲ αἰσθητόν. (*De an.* III 8.431b23-28)²⁵³

Thus, sense and science are divided as are things, into act and ability.²⁵⁴ Now, science and sense in ability are related to the knowables and to the sensibles which are in ability; science and sense in act are related to the knowables and the sensibles in act. In a different way, however. Indeed, the sense in act and science or intellect in act are the sensibles and the knowables in act; but the sensitive and cognitive abilities of the soul are neither the sensibles, nor the knowables themselves. They are only these latter in ability: the intellect, the knowables; the sense power, the sensibles.

Aristotle goes back to the opinion of the Ancients:

²⁵² 'What exists is either sensible or intelligible; and in a sense intellectual knowledge is the knowable and sensation the sensible.' As Albert leaves it to be understood, Aristotle's division of things here probably supposes the use of the third tool in order to find that the sensibles and the intelligibles differ in their relationship to matter: 'Quod autem sic sit omnia, per divisionem patet, quoniam omnia quae sunt, aut sunt sensibilia, quae sunt coniuncta cum materia, aut sunt intelligibilia sicut separata a materia' (*In De an.* 223).

²⁵³ 'We must consider in what sense this is so. Both science and sensation are divided to correspond to their objects, the potential to the potential, and the actual to the actual. The sensitive and intellective faculties of the soul are potentially these objects, viz., the sensible and the knowable.'

²⁵⁴ Aristotle reintroduces, by the third or second tool, the distinction between being in act and in ability.

Ἀναγκη δ' ἢ αὐτὰ ἢ τὰ εἶδη εἶναι. Αὐτὰ μὲν δὴ οὐ· οὐ γὰρ ὁ λίθος ἐν τῇ ψυχῇ, ἀλλὰ τὸ εἶδος· (*De an.* III 8.431b28-432a1)²⁵⁵

If the soul is all things, it must be either the sensible and understandable things themselves, as Empedocles held that we know earth by earth and water by water, and likewise with other things, or it must be their forms. Now, the soul is not the things themselves, as these thinkers claimed: the stone is not in the soul, its form alone is. For it is in this way that the intellect in act is said to be the same as the intelligible in act, i.e., insofar as the species or form of the thing understood is the form of the intellect in act:

anima est omnia sensibilia et omnia intelligibilia non per hoc, quod habeat in se intelligibilia et sensibilia secundum esse reale, ut dicebant antiqui, sed per hoc, quod habeat in se species et formas intelligibilium ac sensibilibium intentionaliter et sine materia.—Probatur; nam anima sentit et intelligit lapidem non per hoc, quod in se habeat lapidem secundum esse materiale, sed per hoc, quod habeat speciem lapidis sine materia, hoc est secundum esse intentionale. (Maurus, *In De an.* 101#4)

Thus, once again Aristotle corrects the error of his predecessors by emphasizing that sensation and thinking are 'undergoings' only in the broad sense. Aristotle follows up these statements with a beautiful proportion, making use of the fourth tool:

ὥστε ἡ ψυχὴ ὡσπερ ἡ χεὶρ ἐστίν· καὶ γὰρ ἡ χεὶρ ὄργανόν ἐστίν ὀργάνων,²⁵⁶ καὶ ὁ νοῦς δὲ εἶδος εἰδῶν καὶ ἡ αἴσθησις εἶδος αἰσθητῶν. (*De an.* III 8.432a1-3)²⁵⁷

Just as the hand is a tool in view of tools, so too the intellect is the receptacle of intelligible forms, and the sense the receptacle of sensible forms:

Ex quo patet quod anima assimilatur manui: manus enim est organum organorum, quia manus date sunt homini loco omnium organorum que data sunt aliis animalibus ad defensionem uel inpugnationem uel cooperimentum: omnia enim hec homo sibi manu preparat; et similiter

²⁵⁵ 'These faculties, then, must be identical either with the objects themselves or with their forms. Now they are not identical with the objects; for the stone does not exist in the soul, but only the form of the stone.'

²⁵⁶ See *Part. an.* IV 10,687a19: ἡ δὲ χεὶρ ἔοικεν εἶναι οὐχ ἓν ὄργανον ἀλλὰ πολλά· ἔστι γὰρ ὡσπερὶ ὄργανον πρὸ ὀργάνων.

²⁵⁷ 'The soul, then, acts like a hand; for the hand is an instrument which employs instruments, and in the same way the mind is a form which employs forms, and sense is a form which employs the forms of sensible objects.'

anima data est homini loco omnium formarum, ut sit homo quodam modo totum ens, in quantum secundum animam est quodam modo omnia, prout eius anima est receptiva omnium formarum; nam intellectus est quedam forma receptiva omnium formarum intelligibilium et sensus est quedam forma receptiva omnium formarum sensibilium. (Aquinas, *In de Anima*, III 13#790)

Aristotle, having shown that the intellect is not the sense, and then, what it is, he proceeded to discuss its likeness to sense. Once again, he spoke of them as of two similar processes, but going on in parallel. There is thus a risk of not seeing the order between the two. Thus, Aristotle now shows how the intellect depends on sense. After which he will distinguish the intellect from the imagination, having already shown that the imagination is not the sense, but that it, too, does nonetheless depend on it. Aquinas describes what is to be taken up in the following passages:

Quia dixerat quod intellectus is quodammodo intelligibilia, sicut sensus est sensibilia, posset aliquis credere quod intellectus non dependeret a sensu, et hoc quidem verum esset si intelligibilia nostri intellectus essent a sensibilibus separata secundum esse, ut Platonici posuerunt; et ideo hic ostendit quod intellectus indiget sensu, et postmodum quod intellectus differt a fantasia, que etiam a sensu dependet, (Aquinas, *In de Anima*, III 13#791)

To show that the intellect depends on the sense once again underlies a criticism of Plato's opinion that the Ideas our intellect knows exist apart from sensible things. Aristotle starts by reiterating his claim that no thing understood by us seems to exist separated from sensible magnitude; and from this it follows that those things understood in our intellect (and thus separated from sensible things there, albeit in different ways) must still exist in the sensible beings:

ἐπεὶ δὲ οὐδὲ πρᾶγμα οὐθέν ἐστι παρὰ τὰ μεγέθη, ὡς δοκεῖ, τὰ αἰσθητὰ κεχωρισμένον, ἐν τοῖς εἶδεσι τοῖς αἰσθητοῖς τὰ νοητὰ ἐστι, τὰ τε ἐν ἀφαιρέσει λεγόμενα, καὶ ὅσα τῶν αἰσθητῶν ἕξεις καὶ πάθη. (*De an.* III 8.432a2-6)²⁵⁸

Because of this, we cannot acquire science, nor think about what we know already, without sense; consequently, when we understand in act, it is necessary for us to simultaneously form some image:

²⁵⁸ 'But since apparently nothing has a separate existence, except sensible magnitudes, the objects of thought—both the so-called abstractions of mathematics and all states and affections of sensible things—reside in the sensible forms.'

καὶ διὰ τοῦτο οὔτε μὴ αἰσθανόμενος μηθὲν οὐθὲν ἂν μάθοι οὐδὲ ξυνείη.²⁵⁹ ὅταν τε θεωρῆ, ἀνάγκη ἅμα φάντασμα τι θεωρεῖν· τὰ γὰρ φαντάσματα ὥσπερ αἰσθήματά ἐστι, πλὴν ἄνευ ὕλης. (*De an.* III 8.432a7-10)²⁶⁰

Since the intelligibles must exist in the sensible forms, it is necessary for us, in order to understand, to represent an image, since the images are the likenesses of the sensible things. They differ from them in that the images are without the matter. As already stated: the sense is able to receive the forms without the matter. Now, imagination is the movement caused by the actualization of the sense by a sensible object and, therefore, a movement caused by an immaterial form received in the sense. Thus Aristotle is here calling upon the fourth and third tools, in order to compare the images with the things sensed.

We might well wonder why Aristotle is preparing to distinguish imagination and intellect once again. In Chapter 3, Aristotle has indeed distinguished the act of the imagination from the judgment or the enunciation of the intellect, and then from the kinds of judgment to be found in principles, science and opinion.²⁶¹ One reason for making this distinction again is easy to see and well explained by Aquinas, as we saw: the intellect and the imagination are alike in this respect, that they both depend on sense, something that has just been explained for the intellect.²⁶² But it is less clear why Aristotle uses the third tool *differently* here; the differences that he discovers in order to distinguish the intellect from the imagination are not those that he found for the same purpose in Chapter 3 by the use of the third tool.

It seems that the distinction of Chapter 8 presupposes Chapters 4 to 7 on the intellect. Indeed, in Chapter 3, Aristotle gave two arguments to show that the act of imagining and the act of the intellect are not the same. (To the extent that the faculties are distinguished by their acts, he has in fact shown that imagination and intellect are other.) At that time, Aristotle had only compared imagination to the second operation of the intellect, which is more known to us,

²⁵⁹ See *An. post.* I 18.81a38.

²⁶⁰ 'And for this reason as no one could ever learn or understand anything without the exercise of perception, so even when we think speculatively, we must have some mental picture of which to think; for mental images are similar to objects perceived except that they are without matter.'

²⁶¹ *De an.* III 3.427b16-27

²⁶² There would be a lot to say about this likeness: v.g. when Aristotle says that the two principal causes of error are imagination and appetite. If imagination had not some likeness to intellect, this would not be so.

but he had not yet distinguished it from the first. But this time around Aristotle furnishes an argument to distinguish the first act of the intellect from the act of imagining, something he did not need to do in Chapter 3, but that he has to do in 8, having meanwhile distinguished two acts of the intellect. Moreover, it was not previously a question of the very essential characteristics of the second operation of the intellect, for the fact that it does not depend on us and that it always involves an undergoing are rather effects of its property of leading to the true and the false.²⁶³ Now, this is the very property of the second act by which Aristotle distinguishes it, in Chapter 8, from the act of the imagination.

Aristotle therefore first distinguishes the imagination from the intellect in respect to the second operation of the latter, saying that the imagination is other than affirmation and negation, since the true and the false follow from that composition:

ἔστι δ' ἡ φαντασία ἕτερον φάσεως καὶ ἀποφάσεως·
 συμπλοκὴ γὰρ νοημάτων ἐστὶ τὸ ἀληθὲς ἢ ψεῦδος. (*De an.*
 III 8.432a10-12)²⁶⁴

Now, the composition brought about by the imagination does not imply the true and the false, unless this is considered by the intellect. But then, what will distinguish the concepts, neither true nor false, from the images? Aristotle now explains that the understanding of simple notions differs from the act of the imagination, since even though the simple notions require images, they are not images themselves:

²⁶³ Aristotle makes use of this difference moreover to explain the difference concerning the will in Chapter 3: δοξάζειν δ' οὐκ ἐφ' ἡμῖν· ἀνάγκη γὰρ ψεύδεσθαι ἢ ἀληθεύειν (427b20-21). See Aquinas, *In de Anima*, III 4#633-634: 'probat quod non sit idem fantasia et opinio, duabus rationibus. Quarum prima talis est: passio fantasie est in nobis cum uolumus, quia in potestate nostra est formare aliquid quasi apprens ante oculos nostros (...) set opinari non est in potestate nostra, quia necesse est quod opinans habeat rationem per quam opinetur uel uerum uel falsum; ergo opinio non est idem quod fantasia. Secundam rationem ponit (...) Que talis est: ex opinione statim sequitur passio in appetitu, quia, cum opinamur aliquid esse graue uel terribile, statim compatimur tristando uel timendo, et similiter si aliquid sit confidendum, id est de quod debeat aliquis confidere et sperare, statim sequitur spes uel gaudium; set ad fantasiam non sequitur passio in appetitu, quia, dum apparet aliquid nobis secundum fantasiam, similiter nos habemus ac si consideraremus in pictura aliqua terribilia uel sperabilia; ergo opinio non est idem quod fantasia.'

²⁶⁴ 'But imagination is not the same thing as assertion and denial; for truth and falsehood involve a combination of notions.' See Aquinas, *In de Anima*, III 13#793: 'ostendit differenciam inter fantasiam et intellectum. Et primo quantum ad operationem intellectus que est compositio et diuisio, dicens quod fantasiam alterum est ab affirmatione et negatione intellectus, quia in complexione intellectuum iam est uerum et falsum, quod non est in fantasia: nam cognoscere uerum et falsum est solius intellectus.'

τὰ δὲ πρῶτα νοήματα τίνι διοίσει τοῦ μὴ φαντάσματα εἶναι; ἢ οὐδὲ τᾶλλα φαντάσματα, ἀλλ' οὐκ ἄνευ φαντασμάτων. (*De an.* III 8.432a12-14)²⁶⁵

Aquinas justifies Aristotle's answer by means of a difference: the images are likenesses of the particulars, whereas the concepts are universals abstracted from individual conditions. Whence, Aquinas adds, the images are concepts in ability but not in act (*In de Anima*, III 13#794). Aristotle is therefore making use of the third tool to distinguish imagination from intellect, about which he has just shown that it depends, as does the imagination, on sense.

We could, therefore, sum up this whole process thus. First of all, a clear likeness between imagination and intellect: by the imagination, animals seem in fact to go beyond the external senses, as one does with the intellect. Then there are differences discovered by the third tool, which avoid confusing them. Next there are considerations on the nature of the imagination and of the intellect, following which we can seize other resemblances, among which the fact that both depend on the senses. Finally, a difference, thanks to the third tool. This order also allows us to understand why the differences brought up in Chapter 3 are not the same ones as in Chapter 8: the reason is that the likenesses that the differences permit us to qualify are not the same. In Chapter 3, we have to distinguish, as it were, kinds of knowledge or states of mind; in Chapter 8, it is a question of distinguishing exactly how each faculty is tied to sense.

What we have seen is a clear enough testimony to the use of the tools in order for us to surmise that this use will continue on in a similar way to the end of the book. Let us nonetheless take the time to comment a bit on the account which Aristotle makes of the definition of the soul given by the Ancients. He is, indeed, more precise than at the beginning.²⁶⁶ Now that he has shown that sensation and understanding are not the same, and that he has explained in what they consist, he can affirm that the soul is characterized by movement and by both sensible and intellectual knowledge:

Ἐπεὶ δὲ ἡ ψυχὴ κατὰ δύο ὄριστα δυνάμεις ἢ τῶν ζώων,
τῷ τε κριτικῷ, ὃ διανοίας ἔργον ἐστὶ καὶ αἰσθήσεως,

²⁶⁵ 'How then will the simplest notions differ from mental pictures? Surely neither these simple notions nor any others are mental pictures, but they cannot occur without such mental pictures.'

²⁶⁶ See *De an.* I 2.403b25-27. In III 3.427a17-19, the otherness of sensation and of understanding is put into doubt.

καὶ ἔτι τῷ κινεῖν τὴν κατὰ τόπον κίνησιν, (*De an.* III 9.432a15-17)²⁶⁷

Giving again the principal division of the treatise—the soul as principle of knowledge and as principle of movement—Aristotle, using the third tool, can now in fact divide one of the differences of the definition. He is now ready to undertake a study of the last ability of soul—locomotion—which, as he will show, depends on intellect as well as on sense. And it is here that we will leave off our analysis of the text.

²⁶⁷ 'The soul in living creatures is distinguished by two functions, the judging capacity which is a function of the intellect and of sensation combined, and the capacity for exciting movement in space.'

CHAPTER NINE

SOME APPLICATIONS OF THE TOOLS IN *METAPHYSICS IX*

Although Aristotle, unlike Plato¹, did not make of dialectic the very method of philosophy, he did affirm a close tie between it and metaphysics. If we ask why this particular affinity, several reasons might come to mind: dialectic is necessary both to defend the first common principles—the axioms—and to get to the first proper principles of each science—the definitions. In fact, Aristotle claims that the whole of dialectic is ordered to the problem of definition (*Top. I* 6.102b26-35). Now, these are precisely two tasks that pertain to metaphysics: the axioms belong to what is proper to being as being, and metaphysics seems to dispose of a special insight into the essence of the subjects of the particular sciences.² In

¹ See *Resp.* VII 534b; 534e-535a. On the meanings of the word 'dialectic', see Alexander, *In Top.* 1.8-3.24: τὸ τῆς διαλεκτικῆς ὄνομα οὐκ ἐπὶ τὸ αὐτὸ σημαίνονμενον πάντες οἱ φιλόσοφοι φέρουσιν. He explains that the Stoics called 'dialectic' 'speaking well', which meant saying what was true; and that Plato and the Platonists called 'dialectic' the method of division that they considered to be the crowning point of philosophy. Whence, in keeping with this conception, only the wise could be called 'dialecticians'. But, he goes on to say, for Aristotle, dialectic is a syllogistic method. Now, what is properly called 'dialectic' is the syllogism that proceeds from opinions. Alexander therefore concludes that the other current is not using the word 'dialectic' properly.

² ἀλλὰ πᾶσαι αὐται περὶ ὄν τι καὶ γένος τι περιγραφόμεναι περὶ τούτου πραγματεύονται, ἀλλ' οὐχὶ περὶ ὄντος ἀπλῶς οὐδὲ ἢ ὄν, οὐδὲ τοῦ τί ἐστὶν οὐθένα λόγον ποιοῦνται (*Metaph.* VI 1.1025b7-10, repeated in XI 7.1064a2-9). 'Initially, it seems odd for Aristotle to claim that the special sciences say nothing at all about their subject-genera, given that the first principles include definitions and hypotheses. But he must mean that the kind of thinking involved in demonstrative sciences does not concern itself with giving any reasoned account of the what-it-is or the if-it-is of their basic subject-genera. Thus the clear implication of this whole

addition, in Book Beta, Aristotle gives four reasons why we should argue from probable opinions to contradictory conclusions (that is, why we should use dialectic).³ Looking at these will further help to see the close connection between the *Metaphysics* and the *Topics*:

ἔστι δὲ τοῖς εὐπορηῆσαι βουλομένοις προὔργου τὸ διαπορηῆσαι καλῶς· ἢ γὰρ ὕστερον εὐπορία λύσις τῶν πρότερον ἀπορουμένων ἐστὶ, λύειν δ' οὐκ ἔστιν ἀγνοοῦντας τὸν δεσμόν, ἀλλ' ἢ τῆς διανοίας ἀπορία δηλοῖ τοῦτο περὶ τοῦ πράγματος· ἢ γὰρ ἀπορεῖ, ταύτη παραπλήσιον πέπονθε τοῖς δεδεμένοις· ἀδύνατον γὰρ ἀμφοτέρως προελθεῖν εἰς τὸ πρόσθεν. διὸ δεῖ τὰς δυσχερείας τεθεωρηκέναι πάσας πρότερον, τούτων τε χάριν καὶ διὰ τὸ τοὺς ζητοῦντας ἄνευ τοῦ διαπορηῆσαι πρῶτον ὁμοίους εἶναι τοῖς ποῖ δεῖ βαδίζειν ἀγνοοῦσι, καὶ πρὸς τούτοις οὐδὲ πότεκρον > τὸ ζητούμενον εὔρεκεν ἢ μὴ γιγνώσκειν· τὸ γὰρ τέλος τούτῳ μὲν οὐ δῆλον τῷ δὲ προηπορηκότι δῆλον. (*Metaph.* III 1.995a27-b1)⁴

First of all, the truth we are seeking is nothing other than the solution of an intellectual problem,⁵ analogous to what happens in the case of the body when it is tied up with knots. Now, to untie the knots, we have to study them; so too, to solve a problem, we have to study it

passage is that giving such an account is an appropriate task for the kind of thinking involved in first philosophy' (Cleary 1995, 192).

³ See Madigan A., Aristotle *Metaphysics*, Book B and Book K 1-2, Oxford: Clarendon Press. (Forthcoming.) Perspicaciously noting that Aristotle's case for beginning with an aporetic discussion is couched in three metaphors: the knot, the road, and the trial; he detects three reasons for this. Cleary 1995, 199-205 comes up with four. Owens (1963, 218) and Ross (1924, 221) count three reasons, but enumerate the same four.

⁴ 'Now for those who wish to get rid of perplexities it is a good plan to go into them thoroughly; for the subsequent certainty is a release from the previous perplexities, and release is impossible when we do not know the knot. The perplexity of the mind shows that there is a "knot" in the subject; for in its perplexity it is in much the same condition as men who are fettered: in both cases it is impossible to make any progress. Hence we should first have studied all the difficulties, both for the reasons given and also because those who start an inquiry without first considering the difficulties are like people who do not know where they are going; besides, one does not even know whether the thing required has been found or not. To such a man the end is not clear; but it is clear to one who has already faced the difficulties.' Tredennick translation. Unless otherwise indicated, the translations from the Greek of the *Metaphysics* are those of Tredennick, Loeb Classical Library.

⁵ More precisely, the most forceful refutation of the contrary opinion constitutes a demonstration: ταύτας οὖν καλῶς ἔχει τὰς δόξας ἐξετάζειν, οἱ γὰρ τῶν ἀμφισβητούντων ἔλεγχοι τῶν ἐναντιουμένων αὐταῖς λόγων ἀποδείξεις εἰσὶν (*Eth. Eud.* I 3.1215a5-7).

first. 'Articulating a difficulty shows how to solve it.'⁶ A second reason is that just as in traveling we must know where we are going before setting out, so too, to investigate without having carefully examined the difficulties is like walking without knowing where we are going. Further, just as someone who doesn't know where he is going may not know enough to stop when he gets there, so too someone who doesn't know what the goal of his investigation is, will run the risk of not recognizing the answer when he finds it.

ἔτι δὲ βέλτιον ἀνάγκη ἔχειν πρὸς τὸ κρίναι τὸν ὡσπερ
ἀντιδίκων καὶ τῶν ἀμφισβητούντων λόγων ἀκηκοότα
πάντων. (*Metaph.* III 1.995b2-4)⁷

Finally, one is better situated to decide a question after having heard the arguments on both sides, much like a judge in a litigation.

The fourth reason turns out to be the same as the first of the two reasons given in the *Topics* I 2 for the usefulness of dialectic in respect to philosophical knowledge. The first three reasons, however, seem to have a connection with both reasons given in the *Topics*, since the dialectical method used by the metaphysician to seek the truth always involves arguing to opposites, and may consist in a road whose goal is the beginnings, namely, when he is defending the first common principles and when he is seeking the τί ἐστι.⁸

In the *De Caelo*, Aristotle says:

διεξελεθόντες πρότερον τὰς τῶν ἄλλων ὑπολήψεις· αἱ
γὰρ τῶν ἐναντίων ἀποδείξεις ἀπορίαι περὶ τῶν
ἐναντίων εἰσίν. (*Cael.* I 10.279b5-7)⁹

And he goes on to add:

⁶ Madigan, *ibid.*

⁷ 'Further, one who has heard all the conflicting theories, like one who has heard both sides in a lawsuit, is necessarily more competent to judge.'

⁸ Concerning this passage (995a24-b4), see also Cleary 1995, 197-203. If this passage on *aporein* can help to better understand the philosophical uses of dialectic as described in the *Topics*, the latter treatise can, for its part, furnish an explanation of what an *aporia* is. See *Top.* VI 6.145b1-2; 145b4-5; 145b17-20. See Owens 1963, 217.

⁹ 'let us first go over what others have thought, for the demonstrations of their opposites are difficulties for the contrary opinions.' My translation

ἅμα δὲ καὶ μᾶλλον ἂν εἴη πιστὰ τὰ μέλλοντα
 λεχθήσεσθαι προσηκούσι τὰ τῶν ἀμφισβητούντων
 λόγων δικαιώματα. τὸ γὰρ ἐρήμην καταδικάζεσθαι
 δοκεῖν ἥττον ἂν ἡμῖν ὑπάρχοι· καὶ γὰρ δεῖ διαιτητὰς
 ἀλλ' οὐκ ἀντιδίκους εἶναι τοὺς μέλλοντας τᾶληθῆς
 κρίνειν ἱκανῶς. (*Cael.* I 10.279b7-12)¹⁰

Aristotle seems to be saying that the more proof we have for one of the contrary positions, the more problems we have for the other. But, of course, the same will hold for arguments in favor of the other opinion, so that, having heard both sides, we may have problems with both, such that finally, as in the text of the *Eudemian Ethics* already quoted, and: ἡ εὐπορία λύσις τῶν ἀπορουμένων ἐστὶ, as Aristotle puts it in *Metaphysics* III 1.995a28-19. If, therefore, our position is the correct one, then we ought to be able to explain where the contrary position went wrong.

In order to conclude that this passage contains the first reason for doubting in the above text of the *Metaphysics*, we must consider that Aristotle leaves us to understand here that 'the solution of the difficulties is the truth one is seeking'. Once this is laid out, indeed, if the confrontation with the opinions of others creates difficulties or *aporia*, whoever desires to get to the truth must take account of these opinions. Thus, the first reason of the *De Caelo* seems to justify collecting the contrary opinions that will create doubt; the second, that one must resolve them.

Perhaps Aristotle is introducing an idea here that is absent from the text of the *Metaphysics*. It is not enough to examine the arguments concluding to opposites and to eventually determine which are the most solid, which means resolving the difficulty. One must also explain why those who hold these rejected opinions were able to do so, which is to show how their premises, although false, could yet appear to be true. Aristotle states this in more than one place.¹¹ Finally, the third reason from the passage in *De Caelo* quoted above corresponds to the fourth of the *Metaphysics*, but in addition to mentioning the dispositions necessary for judging, it adds a consideration of those that should be avoided.

¹⁰ 'Besides, those who have first heard the pleas of our adversaries will be more likely to credit the assertions which we are going to make. We shall be less open to the charge of procuring judgement by default. To give a satisfactory decision as to the truth it is necessary to be rather an arbitrator than a party to the dispute.' My translation

¹¹ See, for example, *Ph.* IV 4.211a7-11.

THE USE OF THE FIRST TOOL IN THE *METAPHYSICS*

In the *Metaphysics*, Aristotle clearly uses the tools, at least the first one, everywhere he argues dialectically and among other places: in Book Alpha, to examine the opinions of his predecessors concerning causes; in Book Beta, to weigh the diverse positions and eventually to discover principles; and in Book Gamma, to examine the opinions concerning the principle of contradiction.

Book Beta furnishes us with a good illustration of the specific use of the first tool by metaphysics. Indeed, whereas, in the particular sciences, Aristotle lays out separately the doubts about each of the particular questions concerning which he intends to seek the truth, in the *Metaphysics*, he seems to lay out all the doubts about the subject at once, in the same book and chapter.¹² Brandis 1834, 69 described Book Beta as an ‘antinomical discussion of the main problems of the first philosophy’.

Est autem attendendum, quod propter has rationes consuetudo Aristotelis fuit fere in omnibus libris suis, ut inquisitioni veritatis vel determinationi praemitteret dubitationes emergentes. Sed in aliis libris singillatim ad singulas determinationes praemittit dubitationes: hic vero simul praemittit omnes dubitationes, et postea secundum ordinem debitum determinat veritatem.—Cuius ratio est, quia aliae scientiae considerant particulariter de veritate: unde et particulariter ad eas pertinet circa singulas veritates dubitare: sed ista scientia sicut habet universalem considerationem de veritate, ita etiam ad eam pertinet universalis dubitatio de veritate; et ideo non particulariter, sed simul universalem dubitationem prosequitur. (Aquinas, *In Metaph.* III 1#343)

This reason does not seem to me to be the most convincing of those given by Aquinas because it is incomplete. Aquinas is telling us that the metaphysician must have a universal doubt. So be it! But why then is it that the one who doubts about many things which have a tie to one thing should ask his questions separately, whereas the one doubting universally about things in relation to being must ask all his questions at once? Aquinas offers us no answer to this.

Now, I would say that whoever compares the dialectic in the *Metaphysics* with the dialectic—say, in the *Physics* or in the *De anima*—will see that the first is a more universal dialectic. This means that the aporia that the metaphysician works up, since they are about all

¹² *Metaph.* III 1.995b5-996a15

of being, are very universal, whereas the questions raised in the *Physics* and the *De anima* are proper to their particular and limited subject-matter.¹³

Now, why, at the beginning of the consideration of motion in general, of that of local motion, or that of life, are not all the aporia laid out which concern these parts of natural philosophy, as are those of metaphysics? Perhaps this is due precisely to the universality of the subject of the latter: both its causes and its properties are beings. Indeed, because the subject of wisdom is most universal, it is impossible to find causes or properties of this subject to which the names of the subject will not apply in some way. But in the case of the mobile, for example, the principles of motion (the subject), are not motions, no more than are the measures of motion. Whence it follows that Aristotle will be treating the aporia concerning the principles, those about the subject and about its measures separately, since these are different realities.

Moreover, Aquinas brings up another reason coming from the manifestation of the adequate order of consideration:

Potest etiam et alia esse ratio; quia dubitabilia, quae tangit, sunt principaliter illa, de quibus philosophi aliter opinati sunt. Non autem eodem ordine ipse procedit ad inquisitionem veritatis, sicut et alii philosophi. Ipse enim incipit a sensibilibus et manifestis, et procedit ad separata, ut patet infra in septimo. Alii vero intelligibilia et abstracta voluerunt sensibilibus applicare. Unde, quia non erat eodem ordine determinaturus, quo ordine processerunt alii philosophi, ex quorum opinionibus dubitationes sequuntur; ideo praelegit primo ponere dubitationes omnes seorsum, et postea suo ordine dubitationes determinare. (*In Metaph.* III 1#344)

It may be that it is more important in metaphysics to show the reader in what order the aporia should be resolved. It is easier to understand that it is appropriate to examine the measures of motion and mobile being after having studied their principles than to understand that you must study sensible substances before formal, or immaterial, substances. This difficulty would moreover explain the absence of much consensus about the order of consideration among Aristotle's predecessors, and why, being in disagreement with them on this point, he would prefer to expound their positions with a view to clarifying the problem, without having to follow the order they proposed.¹⁴

¹³ εἰσὶν ἀπορίαι περὶ ἐκάστην πραγματείαν οἰκεῖαι (*Eth. Eud.* I 3.1215a3-4).

¹⁴ Since I think that the first reason given by Aquinas is not a reason, I agree with Cleary 1995, 265 that 'the general impression created by Aquinas' explanation is that Aristotle gathered all of these problems together in

It is true that Aristotle raises many doubts together in other treatises too. One thinks, for example, of the first books of the *Physics* and of the *De Anima*. But there is an important difference between these cases and that of the *Metaphysics*. It is clear that, in the *Metaphysics*, the doubts of Book Beta are the chief questions of wisdom and that the answers to them or the resolutions of them are spread throughout the remaining books. Some questions are answered in Book IV, some in VII and VIII, others in Book IX, others in Book XII, etc.¹⁵ In the *Physics*, on the other hand, the doubts in Book I are all on the same initial problem of how generation is to be explained, and those in Book I of the *De Anima* are all centered on the definition of the soul. Thus in other parts of both of these treatises it is very clear that there are abundant doubts that were not explicitly, nor even implicitly raised at the beginning, such as are found in Books III and IV of the *Physics*, and Book III of the *De Anima*.

In order to examine all these questions about the mode and the subjects of the science of being as being, it will be necessary to be able to procure a large number of very universal probable statements and, therefore, to possess the first tool exceptionally well.¹⁶ Let us not forget that it will ultimately allow one to *abound* (*euporein*) in dialectical arguments and

one book because they do not really fit into his own order of inquiry: i.e. starting from sensible things and moving to the supersensible'. But I do not think, as Cleary does, that this shows that Aquinas is rejecting the reasons for doubting that Aristotle gives: 'But this makes nonsense of everything that Aristotle says at the beginning of *Metaphysics* III about the necessity of first getting to know a problem and its cluster of difficulties before going on to propose a solution' (Cleary 1995, 265). Indeed, it seems to me that what Aristotle says there justifies asking appropriate questions at the start of every enquiry and, therefore, laying out the *aporia* as Aristotle does subsequently, whereas the reason concerning the order that Aquinas gives would justify the fact that Aristotle is asking all the questions about being all at once. It seems to me that Aquinas is thus admitting that one must doubt for the four reasons given by Aristotle at the beginning of Beta, but that he is explaining that Aristotle must doubt about all of these at once by the fact that he is proposing to proceed to the resolution in an order which is different from that of his predecessors.

¹⁵ It would be going quite beyond the scope of this thesis to examine whether all the doubts of metaphysics are really raised in Book Beta and whether the subsequent doubts do not in some way arise from those in Book Beta and are not subordinated to them. But I suspect that it is the case.

¹⁶ According to Madigan, *ibid.*, Book Beta respects the essential characteristics of dialectic in presenting many endoxa, and, even if he attributes to it what I consider to be common to the four tools, he does underline the extensive use of the first tool there. Thus, when I say that there must be an abundant use of the first tool in a context such as that of Book Beta, this does not necessarily imply that there is more use of it than of the others, but that there must be use of the tools, whichever they are. The reason is that even if I speak of the first tool in respect to what is specific to it, I am still not speaking about it as it is distinguished from the others, but as presupposed to them.

eventually *to abound* in truths.¹⁷ And it is necessary to possess the first tool very well also because of the difficulty of the questions. Aristotle himself—if that is any consolation for us—finds these proposed problems particularly difficult. Indeed, he finishes their enumeration by admitting that with respect to them not only is it difficult to discover the truth, but it is also difficult to proceed dialectically, that is, to gather the opinions from which the arguments pro and con proceed: ‘with regard to those problems not only is it difficult to attain to the truth, but it is not even easy to state all the difficulties adequately’ (*Metaph.* III, 1.996a15-17).¹⁸

The examples of the use of the other three tools that we are now going to examine are taken from Book Theta, which is concerned with ability and actuality. We will thus be using abilities known by their actualities in order to study the very notions of ability and actuality.

THE USE OF THE SECOND TOOL IN *METAPHYSICS THETA*

Although we are going to concentrate on Book Theta, it is important to point out that there is evidently extensive use of the second tool in Book Delta, since the whole book is devoted to distinguishing the senses of the central words in metaphysics.¹⁹ Among these words, in Chapter 12, Aristotle distinguishes the senses of ‘ability’—which he will be doing again, but more briefly, in Theta.

Indeed, in Theta, Chapter 1, after having recalled this procedure, ‘we have made it plain elsewhere that ‘ability’ and ‘to be able’ have several senses’ (1046a4-6)—the terms used are very close to those which describe the second tool in the *Topics*—Aristotle excludes two

¹⁷ See *Top.* I 13.105a20-21. ‘The Greek root *por-* conveys two notions: (a) a way or passage and (b) supply or abundance (...) the noun *euporia* at 995a28-9 is translated “good supply”, i.e., of truth, and the verb *euporein* at 995a27 and 996a16-17 is translated “be well supplied”, i.e., with truth’ (Madigan, *ibid.*)

¹⁸ ‘Listing the aporiae is not the same thing as working through them in detail, but even composing a good list of aporiae is a demanding process (cf. 996b17) (...) It is no accident that we possess three versions of the aporiae in B1, B 2-6, and K 1-2’ (Madigan, *ibid.*)

¹⁹ As to his interpretation of *pollachôs legetai*, Owens 1963 has the same opinion on the use that Aristotle makes of it in Book Delta of the *Metaphysics* and in the *Topics*. He identifies the homonymy of things with what it is to be said in many ways, an expression which he consequently applies to things. See 1963, 113. It seems to me, however, that without denying that the subject, causes and properties of being as being which are named in many ways by the words of Book V are things—homonymous things—and even that things are often the subject of the expression *pollachôs legetai*, for the reasons already given, it is the meanings of words (and of expressions) which are the subjects of this book. This is clearly the opinion of Albert, Aquinas, Maurus and of Smith, and is reflected in the great majority of the translations.

equivocal senses of 'ability', and then enumerates the principal ones: (1) a principle of change in another being, or in the same being as other; (2) a principle, in a passive being, of a change which it is likely to undergo by the action of another being, or of itself as other; (3) the disposition of that which is not likely to become worse or to be destroyed by another or by itself as other. Finally, all these abilities are so called either because they merely act or are acted upon in a particular way, or because they do so well.

It might be interesting to point out that there could be another use of the second tool (or a use of the third) by Aristotle before this use of the second, one which puts the dialectical act of judging into greater evidence. We have seen that he started to distinguish an ability to act upon from an ability to undergo. Now, it may well have been from Plato that he took his inspiration. Indeed, it is precisely this same distinction that the Stranger proposes in the *Sophist*, supposing that in so doing he is furnishing Theaetetus with a definition of being:

My definition [of being] would be, that anything which possesses any sort of ability to affect another naturally, or to be affected by another (...) all such is being; for I posit as definition which defines beings that they are nothing other than simply ability. (*Soph.* 247e)

Aristotle would, therefore, have appropriated Plato's distinction of being here into active and passive ability, but with modification: he will apply it exclusively to ability, which is only a part of the division of being, whose other part is actuality.

One can already see in Delta the special way in which metaphysics uses the second tool by the fact that Aristotle is not content to simply distinguish the senses of each word, but that he orders them also, something that is not at all mentioned in the *Topics*. δεῖν...τὸν σοφὸν...ἐπιτάττειν (*Metaph.* I 2.982a18).²⁰ This ordering of the meanings of words will have to be according to one of two principles. Either according as the meanings are better known to us, or according as they are more in keeping with what is more knowable in itself. The first way is nonetheless the most obvious and common way. For we name things as we know them, so that the order in which we place a name upon things generally follows the order in our knowing. Now, in order to apply these principles, one would have to know things universally and in relation to our mind. Only Wisdom can do so.

²⁰ This almost military metaphor is meant to show that just as the one who commands in the practical areas of life 'orders' the ones commanded to some determinate end through determinate means, so wisdom will order the inferior sciences to their ends. See *Metaphysics* I 2.982a16-19; 982b3-7. Thus, if the wise do not always 'give orders' in practical matters, they do always order.

Nevertheless, to say that it belongs to the wise to order meanings of words is not to deny that it belongs also in some way to the logician or the natural philosopher, and even with respect to the same words.²¹ I do not maintain, for example, that the natural philosopher cannot know and order at least some senses of 'nature'. He can certainly see that the word first evokes the idea of matter as that from which the thing comes and that makes it to be what it is, and from this he can reason that form is even more such a principle of becoming and being, and thus deserves even more than matter the name of 'nature'. Aristotle does in fact distinguish nature as matter and as form in the second book of the *Physics*, so that we might even ask why the wise man should distinguish the senses of 'nature'. As tied to one genus of things (the mobile), would it not belong to the natural philosopher more?²² Yet 'nature' can also name any substance, even those that are not material and mobile. Thus, his experience limits the natural philosopher to the meanings of 'nature' which are applicable to material things.

Consequently, given their universal extensions, the words found in Book V pertain to metaphysics in a special way, and it belongs to the wise man to distinguish and order all the senses of them, and to do this with certitude. For, when we say a person versed in one particular science can order the meanings of a common word such as those found in Book Delta but less perfectly than the wise man, less perfectly means that he cannot grasp all the meanings, as in the example given, but also sometimes that the order that he puts between them is only probable. It is in this way, moreover, that the dialectician will always order the meanings of such words.

Alexander, in his commentary, was quite aware of this difference:

²¹ It is really not enough to ask why it belongs more generally to the wise man to order the meanings of words; one should also explain why the words in Book Delta have a special interest for him. One reason is that these words name the subject of wisdom, its parts, their causes and properties. They also are used in the axioms. Now, if it belongs to wisdom to defend and clarify the axioms, as Aristotle affirms in Book IV, it will also have to distinguish and order the meanings of these words. Another reason is that these words are not tied to any particular matter. Whence they seem to pertain to wisdom, which is most universal. Another yet is that it belongs to wisdom to consider the most difficult things. (See *Metaphysics* I 2.982a10-12.) Now, as we learn in the *Sophistical Refutations*, these words are the most difficult to distinguish (7.169a22-25).

²² Aquinas does in fact ask this question. See *In Metaph.* V 5#808: 'Hic distinguit hoc nomen Natura: cuius quidem consideratio, licet non videatur ad primum philosophum, sed magis ad naturalem pertinere, ideo tamen hic hoc nomen natura distinguitur, quia natura secundum sui quamdam acceptionem de omni substantia dicitur, ut patebit. Et per consequens cadit in consideratione philosophi primi, sicut et substantia universalis.'

πρὸς δὲ τούτοις κείται, περὶ ὧν ὁ διαλεκτικὸς κατὰ τὸ ἔνδοξον ποιεῖται τοὺς λόγους, περὶ τούτων τὴν πρώτην φιλοσοφίαν ἐπιστημονικῶς λέγειν· καὶ γὰρ τῷ διαλεκτικῷ περὶ τὰ κοινὰ πᾶσιν ἢ τοῖς πλείστοις ἢ πραγματεία, καὶ περὶ τῶν πολλαχῶς δὲ λεγομένων ὁ διαλεκτικὸς διαλαμβάνει. ἔσται τοίνυν καὶ διαλεκτικὴ ὁμοία τῇ πρώτῃ φιλοσοφίᾳ, περὶ τῶν αὐτῶν διαλαμβάνουσα, λογικῶς μέντοι ἀλλ' οὐκ ἐπιστημονικῶς. (*In Metaph.* 344)

In addition to explaining the way the dialectician considers the meanings of common words, he shows that he sees how Book Delta, while being like dialectic, nonetheless goes beyond it. Thus, with some words, the dialectician, given the common character of his method, may be able to distinguish all the central senses, and even do so better than the philosopher in a particular discipline, though he will not be able to do so with certitude.

Now, in Theta, as before in Delta, after having distinguished the senses of 'ability', Aristotle takes care to reduce all of them to the first (*Metaph.* IX 1.1046a15-20). Indeed, the first definitions are included in those of the abilities which are related to acting well or undergoing well, since to act and to undergo well imply that one is simply acting and undergoing. Furthermore, both the third and the second of these principles are said to be abilities by reason of their comparison with undergoing. In the one case, it is a question of a principle thanks to which someone is able *not* to undergo; in the other, of a principle because of which someone is able to undergo. Whence, since the undergoing depends on the action, it is necessary that the definition of the active ability should be placed in the definition of the second and third abilities.²³ At the end of Chapter 2, to which we will come back, there is also a good example of Aristotle's ordering of the meanings he has previously distinguished:

φανερὸν δὲ καὶ ὅτι τῇ μὲν τοῦ εὖ δυνάμει ἢ τοῦ μόνον ποιῆσαι ἢ παθεῖν δύναμις, ταύτῃ δ' ἐκείνη οὐκ αἰεί· ἀνάγκη γὰρ τὸν εὖ ποιοῦνται καὶ ποιεῖν, τὸν δὲ μόνον ποιοῦντα οὐκ ἀνάγκη καὶ εὖ ποιεῖν. (*Metaph.* IX 2.1046b24-28) ²⁴

²³ One can find another example of this process in the case of the reduction of the sense of the word 'energeia' to a first sense in *Metaph.* IX 3.1047a30.

²⁴ 'It is evident also that whereas the ability of merely producing (or suffering) a given effect is implied in the ability of producing that effect well, the contrary is not always true; for that which produces an effect well must also produce it, but that which merely produces a given effect does not necessarily produce it well'. Tredennick translation; 'ability' substituted for 'power'.

After having reduced the meanings of ‘ability’ to the first, Aristotle clearly appeals to one of the ways described in the *Topics* of verifying whether a term is used in many senses:

With regard to the opposite put in a contradictory form, you must see whether it is used in more senses than one. For if it is used in several senses, then its opposite also will be used in several senses. (*Top.* I 15.106b13-23, Forster translation)

Thus, after having said that inability is the privation of ability—in a sense which includes contradiction—Aristotle affirms more succinctly what he said in *Delta*, that to each ability there will correspond an inability for being a principle in the way the said ability is a principle:

ἀδυναμία δὲ ἐστὶ στερησις δυνάμεως καὶ τῆς τοιαύτης ἀρχῆς οἷα εἴρηται (...) ἔτι δὲ καθ’ ἑκατέραν δύνάμιν ἔστιν ἀδυναμία ἀντικειμένη (*Metaph.* V 12.1019b15-21)²⁵

There will therefore be as many senses of ‘inability’ as there are of ‘ability’.

Let us come back briefly to two of the reasons given by Aristotle in the *Topics* for the particular usefulness of the second tool. Since most words used by the questioner have more than one sense, the second tool is necessary in order to make clear what is being asked and assented to and laid down, and to avoid equivocation (*Top.* I 18.108a18-29).²⁶ Now, in the passage we have examined, Aristotle is certainly aiming at clarifying the object of his investigation, as well as at avoiding fallacies.

In the *Sophistical Refutations*, Aristotle notes that the victims of equivocation are unable to distinguish in how many ways a word or expression is said, underlining the extreme difficulty of doing so for certain words, among which are ‘one’, ‘being’, and ‘same’ (7.169a22-25), since they are common and analogous (equivocal), as Albert explains (*In Soph. el.* 615). Now, ‘ability’ is without doubt a very common word; it is in a sense coextensive with being, since it is to be found in all the categories.²⁷ Thus, someone who had not distinguished

²⁵ ‘Inability is a privation of ability—a kind of abolition of the principle which has been described— (...) there is an inability corresponding to each kind of ability’. See IX, 1.1046a29-31.

²⁶ For another particularly nice example of the use of this tool, because Aristotle himself mentions the utility of it: see *Cael.* I 9.278b9-11: εἰπόμεν δὲ πρῶτον τί λέγομεν εἶναι τὸν οὐρανὸν καὶ ποσαχῶς, ἵνα μᾶλλον ἡμῖν δῆλον γένηται τὸ ζητούμενον.

²⁷ See *Ph.* III 1.200b26-28: Ἔστι δὴ τι τὸ μὲν ἐντελεχεία μόνον, τὸ δὲ δυνάμει καὶ ἐντελεχεία, τὸ μὲν τόδε τι, τὸ δὲ τοσόνδε, τὸ δὲ τοίονδε, καὶ ἐπὶ τῶν ἄλλων τῶν τοῦ ὄντος κατηγοριῶν ὁμοίως. See

the senses of 'ability', would run the risk of being deceived by the equivocation of an argument such as:

Every ability (third sense) is an impassability;
 now, combustibility is an ability (second sense);
 therefore, combustibility is an impassability.

Thus, here as elsewhere, one can better understand the necessity of an ability when suffering the consequences of not having it

THE USE OF THE THIRD TOOL IN *METAPHYSICS THETA*

With Chapter 2 we go from what was mainly a consideration of words to what is more a consideration of things. Aquinas says, in fact, that after having examined 'ability in itself' (*potentia secundum se*), Aristotle examines it, 'through a comparison with those things in which it is' (*per comparationem ad ea in quibus est*).²⁸ In some way, the tools also follow this order. The second discovers new premises by working immediately on words; the third, on things.

After having distinguished the senses of 'ability', Aristotle affirms that certain of the principles it designate are to be found in inanimate beings, others in animate ones:

Ἐπεὶ δ' αἱ μὲν ἐν τοῖς ἀψύχοις ἐνυπάρχουσιν ἀρχαὶ
 τοιαῦται, αἱ δ' ἐν τοῖς ἐμψύχοις καὶ ἐν ψυχῇ καὶ τῆς
 ψυχῆς ἐν τῷ λόγῳ ἔχοντι (*Metaph.* IX 2.1046a36-b1)²⁹

Before examining how he divides the abilities that are in the animate, it seems pertinent to note that when designating their subject, he substitutes the word 'soul' for 'animate'. I think this was done because the difference between the genera of substance in which one finds the said abilities is more evident when one evokes the notion of the soul, since it is the very difference

also 201a8-10 and *Metaph.* IX 1.1045b32-34: ἐπεὶ δὲ λέγεται τὸ ὄν τὸ μὲν τὸ τὶ ἢ ποῖόν ἢ ποσόν, τὸ δὲ κατὰ δύναμιν καὶ ἐντελέχειαν καὶ κατὰ τὸ ἔργον. See also *Metaph.* XI 9.1065b5-7.

²⁸ In *Metaph.* IX 1.#1773

²⁹ 'Since some of these principles are inherent in inanimate things, and others in animate things and in the soul and in the rational part of the soul'

between them. Now, it is particularly important to grasp this difference between the living and the non living, since it is insofar as these differ that their abilities will differ. The abilities for which they are subjects insofar as they are simply bodies are the same.

It is, therefore, among the abilities of the soul itself that Aristotle distinguishes those principles that are rational and direct their own activities, from the others:

δὴλον ὅτι καὶ τῶν διυψιμῶν αἰ μὲν ἔσονται ἀλογαὶ αἰ
δὲ μετὰ λόγου. (*Metaph.* IX 2.1046b1-2)³⁰

The vegetative abilities and the sensitive ones, leaving aside the possible subordination of the internal senses to reason, only operate in virtue of a natural impulse, and thus do not really differ much from the inanimate abilities. Aristotle therefore regroups these two kinds of abilities of the soul with those of the inanimate in the genus of irrational abilities.

Aristotle then identifies what difference distinguishes the rational abilities from the others:

καὶ αἰ μὲν μετὰ λόγου πᾶσαι τῶν ἐψυκτῶν αἰ αὐτά, αἰ
δὲ ἀλογαὶ μὲν εἶναι, οἷον τὸ θέρμαίνεσθαι
μῶνον ἢ δὲ ἰατρικὴν νόσον καὶ ὑγίαια. (*Metaph.* IX 2.1046b4-7)³¹

The principal one is they have contraries for objects. A practical science, such as medicine, is at the same time an ability for opposites; the doctor is best able to cure, but also to make ill. Since the theoretical sciences consist in abstract conceptions of things, they are also able to seize simultaneously the negation or privation of the thing, i.e., there is the same knowledge of opposites.³² The will, like reason, is capable of opposites, for we can will or not, to do in this

³⁰ it is clear that some of the potencies also will be irrational and some rational.' See also IX 5.1047b35-1048a5 where Aristotle repeats these two divisions.

³¹ Every rational potency admits equally of contrary results, but irrational potencies admit of one result only. E.g., heat can only produce heat, but medical science can produce disease and health.

³² Dialectic is also a rational ability. See Alexander, *In Top.* 4.27-30, where he suggests that dialectic and rhetoric are more called 'ability' than the sciences, which, although able to apprehend the opposite of their subject, are still determined to seeing it in the light of the truth. See also Maurus, *In Top.* 389: 'Dialecticam et Rhetoricam non esse scientias, sed quasdam facultates et potentias. Ratio est, quia scientia non est de utraque parte contradictionis, sed solum de ea parte, quae est vera, adeoque demonstrabilis; ex. gr., Geometria non aequae se habet ad syllogizandum demonstrative, quod diametere quadrati est incommensurabilis, ac quod est commensurabilis, sed determinate syllogizat illam partem, quae est vera, quod nimirum diametere est incommensurabilis, alteram vero partem falsam demonstrative syllogizare non potest; sed Dialectica et Rhetorica sunt de utraque parte contradictionis, et utramque probabiliter syllogizant; ergo Dialectica et

way or even in an opposite way, and even will not to will. But the irrational abilities, operating through inherent forms that exclude their opposites, are always determined to a single object. Thus, the hot has only the ability to heat, and that which can cool never produces other than cold.

In Chapter 5, Aristotle explains another difference between the rational abilities and the irrational, or if not entirely another, one which follows from the first. In the case of the irrational, when the agent and the patient meet in accordance with the ability in question, the one must act, and the other be acted upon. It follows from the nature of an active ability that never produces but one effect that, when the passive subject is present, the active ability must of necessity produce this effect of which it is the cause. But in the other kind of ability, this is not necessary. It is not necessary that the sculptor start to sculpt as soon as he is in the presence of appropriate material. Indeed, those abilities are abilities for producing contrary effects; hence, if when appropriate materials were present it was necessary for such an ability to produce its effects, this one ability would produce at the same time contrary effects, which is impossible.³³ Rather, there is need of desire to determine which of the opposites will be done.

Here we have a case of the use of the third tool in regard to things that are clearly different. We know reason in fact better as an ability open to opposites than as it is determined in certain respects, similar to the irrational abilities. Indeed, discourse is clearly an act of reason as it is undetermined, and this is better known to us than natural understanding, for it is only from our experience of the kind of understanding that results from discourse that we can reason to the existence of a prior natural understanding that is not a product of discourse.³⁴

Rhetorica non sunt scientiae, sed sunt facultates et potentiae quaedam probabiliter syllogizandi utramque partem contradictionis; potentiae enim proprie dicuntur, quae aequae se habent ad opposita.'

³³ See 5, 1048a5-10.

³⁴ Furthermore, when Aristotle first enumerates the genera of powers of the soul in the *De anima*, he calls reason the διαλογητικόν ability (II 3.414a31-32). Now, the word διαλογητικόν clearly refers to discourse as can be seen from its use in the beginning of the *Posterior Analytics* for the knowledge which comes from pre-existent knowledge (I.71a1-2). And we saw that Aristotle first distinguishes reason from the imagination by an act which belongs to reason insofar as it is open to opposites, rather than by an act which belongs to it insofar as it is determined to the true (*De an.* III 3.427b19-22). I am free to *imagine* something good or bad, such as having won the sweepstakes or having a terrorist outside my room with a gun, but I cannot *think* I have won, or that there is a terrorist, without having some reason for doing so. It is the same for the will. A sign of this is that it is easier for us to distinguish it from the sensible appetite by the act by which it selects means than by the act by which it bears on the end; we have difficulty in distinguishing between the good and the merely pleasure. When Aristotle distinguishes the will or higher desire from the sense desiring powers in the *De Anima* (III 2.434a5-15), he indeed does so by the will being deliberative desire.

This use of the third tool therefore presupposes that of the fourth, even if Aristotle does not make this explicit. Indeed, the third tool is not used here so much in order to discover differences—its object are things already clearly different—so much as to make clear the nature, the breathe and extent of a difference, something for which it is necessary to have taken account of likenesses. As we have seen, it would be easy enough to think that the knowledge of things that are different from one another does not require the use of the third tool, but this is not always the case. For, often, the fourth tool having revealed a likeness between things manifestly different that might have passed unobserved, it is then by the use of the third tool that one discovers and proposes with greater precision and assurance the pertinent differences. We already gave as an example that seeing that the point and the unit are alike, at least in respect to both being indivisible principles of quantity, one is helped along in the discernment of the essential differences. The very likeness indicates in what direction the principal differences are to be sought, namely, of what sort of quantity each is a principle and how. It then becomes evident that the main difference we should seek is that the point is the principle of continuous quantity, and thereby has position, whereas the unit is the principle of discreet quantity, and therefore does not have position.

Another example will help: although it is quite evident that fire and the medical art are not the same and that the first is a principle for a determinate action, whereas the second is a principle for a great variety of sometimes opposed actions, the fourth tool will allow one to recognize that these are both in some way principles of change that are in some way determinate. Once this affinity has been established, it is easier to make clear, by use of the third tool, how fire and art are principles of determinate change in quite different ways. It is clear that Aristotle's presentation of the difference between the rational and the irrational abilities is shaded by his perception of a likeness. The contraries are not objects of art or science in quite the same way, he explains.³⁵

A more typical example of the use of the third tool would have been about things clearly alike. Let us choose one from the realm of metaphysics: the 'one' that follows 'being', and the 'one' that is a principle of number are both indivisible, and it is only too easy to confuse them without a use of the third tool.

But this desire is choice. Hence, the will is first known as will, as the ability to choose, rather than as a nature willing something by natural or inborn necessity.

³⁵ See *Metaph.* IX 2.1046b4-15.

In the *Topics*, Aristotle states that the third tool is useful for syllogisms about the same and the other, and for knowing what each thing is. Seeing the difference between two things enables one to syllogize directly that they are not the same. And one cannot define things without seeing their differences.³⁶ Now, one might well ask if Aristotle was seeking to divide abilities into the rational abilities and the irrational, or only attempting to make sure the two were not confused. One thing seems certain, he was not seeking to avoid a confusion of the rational and the irrational abilities, since they are clearly different, and therefore he must have been seeking to clarify their differences. But although this contributes to making better known what they are, I do not think he was quite attempting to define them yet. We already saw that the rational abilities are more strictly abilities than are the irrational ones. Also, a rational ability can make use of an irrational one, as the doctor might use heat to relieve a sore back, so the abilities are not being divided *ex aequo*.

Thus, whoever sets out to discover likenesses between the rational and irrational abilities without using the third tool at the same time, so as to go beyond the merely superficial differences, might well end up affirming that reason and will, just like the vegetative, sensitive and inanimate abilities, are completely determined and that their differences are only apparent.³⁷ Now, the possibility for the rational abilities to tend towards one or the other of two contraries, even if they are naturally ordained to one of them, modifies the likeness itself which exists between them and the irrational abilities: namely, the fact of being at the origin of determinate movements. One cannot, therefore, on the basis of such a likeness conclude that the two kinds of abilities are principles in the same way.

To do so would be a fallacy of the relative and the absolute. Indeed, when Aristotle considers how and why men are thus deceived, he says that it is because the difference between what is said simply and in some respect is so little.³⁸ Indeed, we must look at the qualification of a particular case, or respect, or manner, or time—here, the fact that it is only as to their goal that the movements whose principles are reason and will are determined—as having no extra significance, in order to concede the universality of the erroneous statement—

³⁶ I 18.108a38-b6

³⁷ Thus, one might come to believe that because monkeys are able to carry out very complicated tasks and even to communicate in a fashion, thanks to their imagination, that they are really not all that different from us, and that they can 'think'.

³⁸ Soph el. 7.169b9-12

namely, that these abilities are determined. This example shows well that as the third tool seems more tied to things than to words, in the same way, the fallacies that arise from its imperfect mastery come more from things than from words.

As these things that are clearly different are first of all naturally the objects of the fourth tool, the crudest error in respect to them would have been not to have recourse to this tool, or to use it badly, and consequently to claim that the rational and irrational abilities are completely different. This is exactly the opposite error from that caused by the wrong use of the third tool: here, the fact that it is only in a certain respect that reason and will possess an infinity of possibilities and are not limited to one is taken as having no extra significance to concede the universality of the statement that these abilities are undetermined. It is also an example of the situation where the intellect is struck by the differences to the point of not seeing the likenesses, and an example of the rather rare cases where the incorrect use or simply the non-use of the fourth tool causes error.

Thus, only taking account of the differences between reason and will on the one hand, and the vegetative, sensitive and inanimate abilities on the other, some thinkers came to think that there is no part or side of any contradiction which reason must assent to and cannot agree to its opposite; and likewise that there is nothing that the will must will and cannot will its opposite. John Stuart Mill, for example, in his defense of liberty of thought sees such liberty as respecting reason, which is nowhere determined necessarily to one side of a contradiction. And Jean Paul Sartre sees man's will with no determination to any object.

There are, of course, many others who share these positions. Indeed, those who think, in accord with scientific customs, that every thought is an hypothesis to be tested by its consequences (as many scientists and epistemologists, from Claude Bernard to Sir Karl Popper, do) would hold this position, especially when it is realized that even the confirmation of an hypothesis does not force reason to accept it. (One cannot affirm necessarily the antecedent because the consequent has been affirmed.) And these positions would at first sight seem to agree with the above distinction of a natural and a rational ability going back to Aristotle, if not before. Indeed, it seems to be a case of the excluded middle; either an ability would be determined to one of the opposites or it would not be. But stopping for a moment, we will recall that Aristotle himself holds that some objects of understanding are known naturally, while all others are known by reasoning and study.³⁹ And that he says that all men

³⁹ Although it is difficult to find a passage where Aristotle says that some principles are known by nature, this is clearly enough his position. Let us look at *Nicomachean Ethics* VII 9.1151a15-19 where he compares

tend towards the same good, even if he thinks they have the choice of the means thereto (*Eth. Nic.* I 1.1094a1-2).

This case is very similar to one we saw at the beginning of our analysis of the *De Anima*. We were concerned in fact with two errors, one of them more naive, the other more sophisticated. The first consists in not seeing any likeness between things that are clearly different; the second, in seeking out likenesses to such an extent that one ends up thinking the differences were only apparent. In the *De Anima* it was a question of things clearly alike, namely, the thing known and the knowledge of it. Most people, we noted, omit pointing out the differences and think that the soul's aptitude for knowing depends on the existence in it of the known objects as they exist objectively; they make little or no use of the third tool. But others, more prudent, spend so much time on the differences that they end up denying every likeness between knowledge and its object; they make use of the third tool, while neglecting or omitting the fourth.

THE USE OF THE FOURTH TOOL IN *METAPHYSICS* THETA

In Chapter 6, Aristotle first of all manifests universally what an actuality is by an induction from an enumeration of similar relations. One can thus speak of an analogy of proportion to designate the process that allows one to lay down each of the statements of the antecedent of the induction:⁴⁰

Ἔστι δ' ἐνέργεια τὸ ὑπάρχειν τὸ πρᾶγμα μὴ οὕτως
ὥσπερ λέγομεν δυνάμει· λέγομεν δὲ δυνάμει οἷον ἐν τῷ
ξύλῳ Ἑρμῆν καὶ ἐν ὅλῃ τῆν ἡμίσειαν, ὅτι ἀφαιρεθείη

the principle in foresight (prudence) to the beginning in geometry: 'virtue preserves the fundamental principle, vice destroys it, and the first principle or starting-point in matters of conduct is the end proposed, which corresponds to the hypotheses of mathematics; hence no more in ethics than in mathematics are the first principles imparted by process of reasoning, but by virtue, whether natural or acquired by training in right opinion as to the first principle'. Now, that it cannot be by custom can be seen from *Nicomachean Ethics* VII 11.1152a 29-30: 'habit is easier to change than nature'. This is indeed opposed to the certitude of the beginnings. In the *De Anima* (III 10.433a26-27), he says that every νοῦς is correct; this could not be by custom. Also, in *Metaphysics* IV 3. 1005b30 he does say that the axiom about contradiction is by nature the beginning of all the rest. If their order is by nature, they would also seem to be by nature.

⁴⁰ 'Et ita proportionaliter ex particularibus exemplis possumus venire ad cognoscendum quid sit actus et potentia' (Aquinas, *In Metaph.* IX 5#1827). 'Aristotle indicates (...) that he will not provide definitions, but that we must come to understand *energeia* and *dunamis* by induction from analogy (...) Initially he lists several analogous instances of actuality and corresponding potentiality so that we might grasp their general notion (1048a30-b6)' (Polansky 1983, 161).

ἄν, καὶ ἐπιστήμονα καὶ τὸν μὴ θεωροῦντα, ἂν δυνατὸς ᾖ
θεωρῆσαι· τὸ δὲ ἐνεργεία. (*Metaph.* IX 6.1048a30-35)⁴¹

The result of this induction, which Aristotle starts with, is that actuality and ability are two different modes of existence. He then goes on to explain that the statue, the half-line and the one who knows are said to be in ability when they are still considered in the unworked wood, the uncut line, and the instructed man who is not yet thinking, but that they are said to be in actuality when considered in themselves. Now, it is easy to note that the statue, the half-line and the instructed person exist differently according as they are, or are not, in their respective correlatives.

Aristotle goes on with the aforesaid analogy in such wise as to manifest more precisely the nature of an actuality:

ὅτι ὡς τὸ οἰκοδομοῦν πρὸς τὸ οἰκοδομικόν, καὶ τὸ
ἐργηγορὸς πρὸς τὸ καθεῦδον, καὶ τὸ ὄρων πρὸς τὸ μῦον
μὲν ὅπιν δὲ ἔχον, καὶ τὸ ἀποκεκριμένον ἐκ τῆς ὕλης
πρὸς τὴν ὕλην, καὶ τὸ ἀπειργασμένον πρὸς τὸ
ἀνέργαστον. ταύτης δὲ τῆς διαφορᾶς θάτερον μὲν
ἔστω ἢ ἐνεργεία <ἢ> ἀφωρισμένη, θάτερον δὲ τὸ
δυνατόν. (*Metaph.* IX 6.1048a37-b6)⁴²

The last two of the enumerated relations, less concrete, throw a great deal of light on the difference between what is in a state of actuality and what is in a state of ability. Thus, what is actual is more perfect than what is only able to be so. This is the proportion, although not so explicitly stated in Aristotle, which consists in one of the extremes of the conclusion of the induction, the other extreme being the subjects in actuality and in ability that are being compared.

⁴¹ 'Actuality means the presence of the thing, not in the sense which we mean by ability. We say that a thing is present in ability as Hermes is present in the wood, or the half-line in the whole, because it can be separated from it; and as we call even a man who is not studying a scholar if he is capable of studying. That which is present in the opposite sense to this is present actually.' Treddenick translation

⁴² 'As that which is actually building is to that which is capable of building, so is that which is awake to that which is asleep; and that which is seeing to that which has the eyes shut, but has the power of sight; and that which is differentiated out of matter to the matter; and the finished article to the raw material. Let actuality be defined by one member of this antithesis, and the ability by the other.'

Now, it is clearly the fourth tool that allows us to grasp these proportions. As we have seen, likeness between things in different genera is one of the kinds of likeness with a view to whose consideration the fourth tool is said to serve in the *Topics*:

Likeness must be examined in things belonging to different genera—as A is to B, so C to D..., and also, as A is in B, so is C in D (*Top.* I 17.108a7-10, Forster translation)

Things belonging to different categories or which are very common can be one by analogy:

ἔτι δὲ τὰ μὲν κατ' ἀριθμὸν ἐστὶν ἓν, τὰ δὲ κατ' εἶδος, τὰ δὲ κατὰ γένος, τὰ δὲ κατ' ἀναλογίαν, ἀριθμῶ μὲν ὧν ἡ ὕλη μία, εἶδει δ' ὧν ὁ λόγος εἷς, γένει δ' ὧν τὸ αὐτὸ σχῆμα τῆς κατηγορίας, κατ' ἀναλογίαν δὲ ὅσα ἔχει ὡς ἄλλο πρὸς ἄλλο. ἀεὶ δὲ τὰ ὕστερα τοῖς ἔμπροσθεν ἀκολουθεῖ, οἷον ὅσα ἀριθμῶ καὶ εἶδει ἓν, ὅσα δ' εἶδε οὐ πάντα ἀριθμῶ· ἀλλὰ γένει πάντα ἐν ὅσαπερ καὶ εἶδει, ὅσα δὲ γένει οὐ πάντα εἶδει ἀλλ' ἀναλογίᾳ· ὅσα δὲ ἐν ἀναλογίᾳ, οὐ πάντα γένει. (*Metaph.* V 6.1016b31-1017a3)⁴³

Aristotle informs us right from the beginning of Chapter 6 that he is proposing to define actuality—περὶ ἐνεργείας διορίσωμεν τί τέ ἐστὶν ἢ ἐνέργεια (1048a26-27). We find a confirmation that he is really using analogy and induction to do so when he explains why he proceeds the way he does:

δῆλον δ' ἐπὶ τῶν καθ' ἕκαστα τῆ ἐπαγωγῆ ὃ βουλόμεθα λέγειν, καὶ οὐ δεῖ παντὸς ὄρον ζητεῖν ἀλλὰ καὶ τὸ ἀνάλογον συνορᾶν (*Metaph.* IX 6.1048a35-37)⁴⁴

⁴³ 'Again, some things are one numerically, others formally, others generically, and others analogically; numerically, those whose matter is one; formally, those whose definition is one; generically, those which belong to the same category; and analogically, those which have the same relation as something else to some third object. In every case the latter types of unity are implied in the former: e.g., all things which are one numerically are also one formally, but not all which are one formally are one numerically; and all are one generically which are one formally, but such as are one generically are not all one formally, although they are one analogically; and such as are one analogically are not all one generically.' See also *Metaph.* XIV 6.1093b18-21. Although my principal purpose here is to show how the knowledge of details in the *Topics* can help us to better understand Aristotle's practice, here we also have an example of the opposite. In fact, in *Top.* I 17.108a7-12, Aristotle only gives examples of proportions based on relations of actuality (first or second) to object and form to matter. This could easily give the impression that it is the same in all proportions: 'The proportion can be of actions or habits to their objects, or of forms to their subjects of inhesion' (Owens 1963, 123-124). Now, the study of cases such as that of *Metaphysics* Theta shows that this is not so, and that certain analogies are founded upon a relation of action to agent.

⁴⁴ 'What we mean can be plainly seen in the particular cases by induction; we need not seek a definition for every term, but must comprehend the analogy'. The Greek term συνορᾶν is used many times in the *Topics* with 'likeness' as a direct object. See I 16.108a 12-14; 18.108b7, 19-22.

Indeed, first notions such as actuality cannot be defined by the division of a single genus by differences. They go beyond any genus, they are transcategorical, as is being.⁴⁵ It would, therefore, be principally with a view to coming to know what actuality is that he uses the fourth tool as we saw. To define things found in remote genera—and actuality certainly is, as it is to be found in all the genera, as the examples of it enumerated by Aristotle show—is indeed one of the uses that the consideration of their likeness is said to offer in the *Topics*:

ὁμοίως δὲ καὶ ἐν τοῖς πολὺ διεστῶσι χρήσιμος πρὸς τοὺς ὀρισμοὺς ἢ τοῦ ὁμοίου θεωρία, οἷον ὅτι ταῦτὸν γαλήνη μὲν ἐν θαλάσῃ, νηνεμία δ' ἐν ἀέρι (ἐκότερον γὰρ ἡσυχία), καὶ στιγμή ἐν γραμμῇ καὶ μονὰς ἐν ἀριθμῷ (ἐκότερον γὰρ ἀρχή). ὥστε τὸ κοινὸν ἐπὶ πάντων γένος ἀποδιδόντες δόξομεν οὐκ ἀλλοτρίως ὀρίζεσθαι. (*Top. I* 18.108b23-28)⁴⁶

But to the degree that it is only through induction that notions such as actuality are defined, Aristotle also makes use of the fourth tool with a view to this other utility. It is obviously impossible to make an induction without seeing likeness:

Ἡ δὲ τοῦ ὁμοίου θεωρία χρήσιμος πρὸς τε τοὺς ἐπακτικούς λόγους (...) διότι τῇ καθ' ἕκαστα ἐπὶ τῶν ὁμοίων ἐπαγωγῇ τὸ καθόλου ἀξιοῦμεν ἐπάγειν· οὐ γὰρ ῥᾶδιόν ἐστιν ἐπάγειν μὴ εἰδότες τὰ ὅμοια. (*Top. I* 18.108b7-12)⁴⁷

We saw previously that an incorrect use of the fourth tool could lead one into error, but that most of the time it seems that it is more likely to breed ignorance. It is a good bet indeed that someone who cannot see how the relation between the point and the line is like the relation between the unit and a number, will be unable to grasp the notion of principle implied here, but that it will not enter his head to claim that the point and the unit are in every respect different. Similarly, an inability to grasp that the statue is to the wood as the half-line is to the line, and as

⁴⁵ See Ross 1924, 251.

⁴⁶ 'The study of the similar in things greatly differing is also useful for definitions, e.g. that a calm in the sea and a stillness in the air are the same (for each is a quietness), or a point in a line and a unit in a number (for each is a beginning). Consequently, if we give what is common to them all as the genus, we shall not seem to be defining strangely.' Smith translation

⁴⁷ 'The consideration of similarity is useful for inductive reasoning (...) because we maintain that it is by induction of particulars on the basis of similarities that we infer the universal; for it is not easy to induce if we do not know the points of similarity.' Forster translation, modified.

the one who is presently using his knowledge is to the one who knows, and as he who builds is to him who can build, but is not, and he who is awake to him who sleeps, and he who is seeing to him who has his eyes shut, and as that which is abstracted from matter to what is in matter, and as what is made up to what is not yet, would indicate a serious inability to understand what actuality is. Whence, the necessity for the fourth tool.

Enough for the fourth tool. But continuing to trail Aristotle will furnish us with another example of the complementarity between the third and fourth tools. For hardly has he established that these relations are alike and that one of the terms of each is an actuality, then he insists on the fact that it is only by analogy that they are all called 'actuality'. Indeed, these relations differ also: the third tool reveals now that the more perfect way of existing of all the terms said to be 'in actuality' in comparison to their correlatives said to be 'in potency' or 'in ability', is not the same. Some are more perfect than what is in pure ability because they are in motion, others, because they are a form.

For example, the statue of Hermes is called an 'actuality' because it is a form in the wood, whereas sculpturing is an 'actuality' because it is the movement or activity of the sculptor in the wood. From whence it follows that the wood and the sculptor are said to be 'able', the former in two ways—as able to undergo the process of sculpturing and as able to have the form of Hermes—the later, as being able to sculpt the statue. Aristotle makes use of the fourth tool and of a short induction in order to make manifest in general this distinction between two kinds of proportions:

λέγεται δὲ ἐνεργεία οὐ πάντα ὁμοίως, ἀλλ' ἢ πρὸς τῷ ἀνάλογον, ὡς τοῦτο ἐν τούτῳ ἢ πρὸς τοῦτο, τόδ' ἐν τῷδε ἢ πρὸς τόδε· τὰ μὲν γὰρ ὡς κίνησις πρὸς δύναμιν, τὰ δ' ὡς οὐσία πρὸς τινα ὕλην. (*Metaph.* IX 6.1048b6-9)⁴⁸

To continue with our example and to complete it by placing it into an induction: as Hermes is *in* the wood or the sculpture is *to* the sculptor, so too science is *in* the wise man, or healing is *to* the doctor and so temperance is *in* the virtuous man, or painting is *to* the painter.

⁴⁸ 'But things are not all said to exist actually in the same sense, but only by analogy—as A is in B or to B, so is C in or to D; for the relation is either that of motion to ability, or that of substance to some particular matter.' See Aquinas, *In Metaph.* IX 5#1828: 'Ad hanc diversitatem actus insinuandam dicit primo, quod non omnia dicimus similiter esse actu, sed hoc diversimode. Et haec diversitas considerari potest per diversas proportiones.'

Aristotle ends up Chapter 6 by distinguishing movement from other kinds of activities, which are proper to the life of soul:

Since no action which has a limit is an end, but only a means to the end, as, *e.g.*, the process of thinning; and since the parts of the body themselves, when one is thinning them, are in motion in the sense that they are not already that which it is the object of the motion to make them, this process is not an action, or at least not a complete one, since it is not an end; it is the process which includes the end that is an action. *E.g.*, at the same time we see and have seen, understand and have understood, think and have thought; but we cannot at the same time learn and have learnt, or become healthy and be healthy. We are living well and have lived well, we are happy and have been happy, at the same time; otherwise the process would have had to cease at some time, like the thinning-process; but it has not ceased at the present moment: we both are living and have lived. Now of these processes we should call the one type motions, and the other actualizations. [τούτων δὴ <δει> τὰς μὲν κινήσεις λέγειν, τὰς δ' ἐνεργείας] (*Metaph.* IX 6.1048b18-28)

Certain actualities that are not forms are not movements either, since they constitute ends in themselves and not simply means. Every movement tends towards its term, which is something other than itself; once this term is reached, there is no more movement. But a perfect actuality is one that constitutes an end. This difference is explicitly pointed out by Aristotle, thanks again to the third tool: 'this process [the one that has a term] is not an action, or at least not a complete one, since it is not an end'.⁴⁹

Let us note that Aristotle is once again using the third tool to show how clearly distinct things differ: and to do so, he had first to find likeness between them by means of the fourth tool: he distinguishes form from movement, by the quite evident fact that the first is perfect and the second imperfect. In doing so, he is in fact beginning by suggesting how two rather unlike actualities differ. It is only afterwards that he sets out to make clear how movement and

⁴⁹ οὐκ ἔστι ταῦτα πράξις ἢ οὐ τελεία γε· οὐ γὰρ τέλος [ἀλλ' ἐκείνη ἐνυπάρχει τὸ τέλος καὶ ἡ πράξις.] (*Metaph.* IX 6.1048b21-23). See Owens 1963, 405: 'Act is not in itself dependent upon movement. Rather, in its fullest sense it is contradistinguished from movement. It does not imply seeking an end outside itself. It is not like building—the purpose of which is a house—but like seeing or thinking—the purpose of which is themselves. These can continue as the same act, instead of striving towards something else and ending when that objective has been attained.' See also Polansky 1983, 163-164.

operation differ from one another;⁵⁰ probably because they are more alike. As it is more difficult to discover differences between things that are very close, likewise it is more difficult to make clear, among those things manifestly unlike one another, how those closer together differ. And it is a principle for Aristotle that one should begin with what is easier.⁵¹

Not only does this chapter show the third and fourth tools in act, but it is also perhaps an example of the way they are useful for the second tool and sometimes even necessary. Indeed, if one can distinguish the diverse meanings of a word without seeing the differences and the likenesses between the things it signifies, it is not possible to furnish definitions of these senses without these, and this is the second part of the ability which is the second tool.⁵² One might be able to say to someone that 'actuality' can be said of movement, of operation and of form (or even of particular kinds of these), but the person to whom this is explained will not necessarily see that they are different in their perfection as actualities and that it is this that causes 'act' to be defined differently according as they name the one or the other. Aristotle's way of proceeding leads us to think that he may be first examining the senses of the word 'actuality'⁵³ which he will know better once the things signified by it have been defined.

Having arrived at this point, perhaps some remarks on the order of the considerations of act and ability in Book Theta may be useful. If we suppose, following Aquinas, that Aristotle is considering ability before actuality in the ninth book,⁵⁴ it would then seem that he is going against the order of proceeding that he established. A closer look, however, shows that this explanation of the process of Book Theta is not violating the general principle, because there is still some knowledge of the actuality before the knowledge of the ability. Indeed, the

⁵⁰ Polansky 1983, 161-163 also speaks about two distinctions. He explains that Aristotle first distinguishes (1048b6-9) between two kinds of 'energeia', namely motion and substance, and he further explains that he is then taking 'substance', as we do, in the sense of form or attribute. He goes on to affirm that Aristotle then distinguishes between 'energeia' (this time taken in the strict sense operation) and motion (1048b18-35).

⁵¹ See, for example, *Metaph.* V 1.1013a1-4.

⁵² See *Top.* I 15.106a2-4: τὸ δὲ ποσαχῶς, πραγματευτέον μὴ μόνον ὅσα λέγεται καθ' ἕτερον τρόπον, ἀλλὰ καὶ τοὺς λόγους αὐτῶν πειρατέον ἀποδιδόναι.

⁵³ See IX 6.1048a30-35; 1048b6-10.

⁵⁴ 'Determinat de potentia et actu; et dividitur in partes tres. In prima determinat de potentia' [Chapters 1-5]. 'In secunda de actu' [Chapters 6-7]. 'In tertia de comparatione actus ad potentiam' [Chapters 8-10]. (Aquinas, *In Metaph.* IX 1#1773).

consideration of ability in what is often called the first part of Book Theta presupposes some knowledge of an actuality, namely of motion. Thus, a more detailed knowledge of the actuality may follow a consideration of the ability, but this consideration will be based on some knowledge of the actuality.

It would be tempting to see the book as divided into three parts, as Aquinas proposes: (1) the consideration of ability, (2) the consideration of actuality, and (3) the comparison of the two or the consideration of their order etc. But such a division seems over-simplified, since whatever the principal object of the consideration ability and actuality must always be examined together. As we saw, they enter into the same proportions, although not in the same place. Thus, in the first part, Aristotle considers only abilities for motion, but he also says certain things about motion as an actuality.⁵⁵ And in the second part, there is not only a general consideration of actuality, by a distinction of its kinds, but also by a corresponding distinction of the abilities for these actualities, as Aristotle in fact presents it at the beginning of his consideration of ability, as well as at the start of his consideration of actuality:

διορίσωμεν καὶ περὶ δυνάμεως καὶ ἐντελεχείας, καὶ πρῶτον περὶ δυνάμεως ἢ λέγεται μὲν μάλιστα κυρίως, οὐ μὴν χρησιμωτάτη γέ ἐστι πρὸς ὃ βουλόμεθα νῦν· ἐπὶ πλέον γάρ ἐστιν ἡ δύναμις καὶ ἡ ἐνέργεια τῶν μόνον λεγομένων κατὰ κίνησιν. ἀλλ' εἰπόντες περὶ ταύτης, ἐν τοῖς περὶ τῆς ἐνεργείας διορισμοῖς δηλώσομεν καὶ περὶ τῶν ἄλλων. (*Metaph.* IX 1.1045b34-1046a4)⁵⁶

Ἐπεὶ δὲ περὶ τῆς κατὰ κίνησιν λεγομένης δυνάμεως εἴρηται, περὶ ἐνεργείας διορίσωμεν τί τε ἐστὶν ἡ ἐνέργεια καὶ ποῖόν τι. καὶ γὰρ τὸ δυνατόν ἅμα δῆλον ἔσται διαιροῦσιν, ὅτι οὐ μόνον τοῦτο λέγομεν δυνατόν ὃ πέφυκε κινεῖν ἄλλο ἢ κινεῖσθαι ὑπ' ἄλλου ἢ ἀπλῶς ἢ

⁵⁵ As we shall see afterwards, in addition to explicitly affirming it in Chapters 12 of V and 1 and 2 of IX, Aristotle is still talking at that point about ability as a principle of change (κίνησις) and motion (μεταβολή). Furthermore, the examples he gives in Chapter 2, where he distinguishes the rational abilities from the irrational, are abilities to movements of the productive sciences, whereas in Chapter 6, it is a question of actuality (ἐνέργεια) and of substance (οὐσία).

⁵⁶ 'let us also gain a clear understanding about potentiality and actuality; and first about potentiality in the sense which is most proper to the word, but not most useful for our present purpose—for potentiality and actuality extend beyond the sphere of terms which only refer to motion. When we have discussed this sense of potentiality we will, in the course of our definitions of actuality, explain the others also.'

τρόπον τινά, ἀλλὰ καὶ ἑτέρως, διὸ ζητοῦντες καὶ περὶ
τούτων διήλθομεν. (*Metaph.* IX 6. 1048a25-30)⁵⁷

Thus it is not only the actualities which are distinguished in the second part, but also, in a more general way than before, the abilities, so that the employment of induction and seeing a proportion are also useful for understanding them, as Owens well explains it:

This procedure in determining act and potency is according to Aristotle's usual empirical manner. The instances of act are merely pointed out in contrast to the instances of the corresponding potency. (1963, 404)⁵⁸

Thus, rather than being a consideration of ability followed by a consideration of actuality, the process, that Polansky 1983, 161 calls 'pedagogical', starts from ability and actuality as found in changing things to proceed towards a more universal knowledge of ability and actuality.

Change, as found in sensible things, serves therefore as the basis for the study of act and potency. The goal of the investigation, however, lies beyond the order of change. Θ, accordingly, takes the same position as Ζ. It is investigating a topic in sensible Entities for the purpose of attaining a higher type. (Owens 1963, 403)⁵⁹

Both ability and actuality are considered in the first two parts, but more universally in the second part, so that it is only in Chapter 6 that we come to a full presentation of *energeia* and *dunamis*.⁶⁰ *As seeing is to the man with the ability to see but with his eyes closed, so is form to the matter before it has been shaped* (*Metaph.* IX 6.1048b2-3), form and matter are kinds of actuality and ability which were not treated in the first part. It is true that motion is not

⁵⁷ 'Since we have now dealt with the kind of potency which is related to motion, let us now discuss actuality; what it is, and what its qualities are. For as we continue our analysis it will also become clear with regard to the potential that we apply the name not only to that whose nature it is to move or be moved by something else, either without qualification or in some definite way, but also in other senses; and it is on this account that in the course of our inquiry we have discussed these as well.'

⁵⁸ That is how Owens speaks about IX 6.1048a30-35.

⁵⁹ See also Aquinas, *In Metaph.* IX 1#1771: 'Sed cum dixerimus de potentia, quae est in rebus mobilibus, et de actu, ei correspondente, ostendere poterimus et de potentia et actu secundum quod sunt in rebus intelligilibus, quae pertinent ad substantias separatas, de quibus postea agetur. Et hic est ordo conveniens, cum sensibilia quae sunt in motu sint nobis magis manifesta. Et ideo per ea devenimus in cognitionem substantiarum rerum immobilium.'

⁶⁰ See Polansky 1983, 161.

talked about too much in the first part, but it may be because it is the act most known to us⁶¹ and has already been considered fully in the *Physics*.

One could, moreover, ask if the ability for motion is not already known from the *Physics*, and why then it is necessary to come back to it in *Metaphysics IX*? But it is principally motion which is known; the ability for motion is certainly known to the natural philosopher, but as it is at the beginning of this particular act more than as ability in general. Also, the wise man distinguishes between natural and rational abilities and, hence, his study must include that of ability for motion.

It is not really possible here to cover all the material in Book Theta, but when one remembers that starting with Chapter 8, Aristotle compares movement, operation and form with the ability for these actualities, one realizes that the metaphysician not only uses the third tool to distinguish things, but that he also orders them, as, in fact, he orders the senses of the words he has distinguished thanks to the second tool.

⁶¹ That 'act' should first have named movement is a sign of it. See *Metaph.* IX 3.1047a30-32.

CONCLUSION

Our examination of the dialectical tools as expounded in the *Topics* and as applied to parts of two major philosophical treatises of Aristotle's should be sufficient to show the value of this doctrine, and thus to reinforce the position that the *Topics* is indeed a necessary and important part of Aristotle's logic, and not a description of some now outmoded sport of intellectual jousting.

A famous physicist claimed that 'God is in the details', and although no doubt this affirmation should not be brandished about carelessly (philosophy is not physics), it is my conviction that much of the incomprehension about Aristotle's logical works comes from a lack of that attention to certain details that necessarily accompanies any effort to apply logic, as well as from a tendency to think that whatever is more easily understood is naive, and thus to go after what is more difficult first. The neglect of any consideration of the application of the tools goes indeed hand in hand with a serious misunderstanding of what purpose dialectic, as described in the *Topics*, is supposed to serve, especially in regard to first principles and to demonstration.

There is, to my knowledge, no work that has previously undertaken to study seriously these tools and to apply this doctrine to an analysis of the very texts of Aristotle. This is what I have tried to do. Now, among the passages we have examined in the second part, there are very many that are clearly dialectical and that involve the use of the dialectical tools. They testify to the nature of these tools as described in the first part, and to their use in the treatises. They confirm the hypothesis that the use of *dialectical* tools always implies a judgment following upon a comparison of the premises one is seeking to take with already-existing, or at least potentially existing opinions; and, that the first tool concerns simple statements, whereas the three others concern complex statements.

But many questions remain to be answered. For example, other passages we have examined are far from being clearly dialectical. Most of the time our doubts about their logical character stem from the rather confident tone and assurance with which Aristotle affirms his conclusions. But since there are reasons to think that the majority of these discourses are certainly not demonstrative, one may well ask if it is possible that they might after all be dialectical also. If this is so, then in almost all the passages where we have seen the use of some tool, Aristotle would be proceeding dialectically.

Indications that many of these arguments in the treatises that are not clearly dialectical at first sight must still be so can be found in the principle that no science proves its subject; it cannot therefore be apodictically that Aristotle the psychologist acquires the knowledge of the nature of the sensitive and intellective soul. And even for the wise it is impossible to demonstrate principles concerning notions as elementary and common as the kinds of cause, contradiction, the modes of the subjects of metaphysics, ability and actuality, since nothing is prior to them.

Nonetheless, we should not go so far as to claim that all knowledge which does not follow from demonstration is dialectical.¹ To take up a thesis dear to Robert Bolton 1990, 196, that dialectic is necessary for the discovery of the first principles, does not at all mean that it is sufficient.² There are, in addition, things that seem to indicate that the psychologist and especially the wise man possess the tools in such an excellent way that often, when they make use of them one cannot speak of dialectic alone. Their use of the tools presents particularities (especially in metaphysics): for example, the ordering of the senses of words, and of very common words, as well as of the things which have been distinguished; and the community and/or difficulty of the things about which they quickly find fundamental differences and likenesses, without trial-and-error. But most of all, the apparent certitude of a lot of their processes, in which there is no mention of a comparison of their premises with opinions, except when it is carried out with a view to emphasizing the fact that these opinions are being

¹ Although it is certainly very illuminating to speak of the dialectical syllogism as one that is not demonstrative, one must still be careful to understand what exactly one is affirming, and not to suppose that the proposition is convertible.

² One would have to verify Irwin's position that the principles he claims to be concluded with certitude by dialectic in both the *De Anima* and the *Metaphysics* are really so, or whether it is not rather dialectic and intuition, or even demonstrated conclusions. I tend to think so. As to his position that there is no dialectic as described in the *Topics* in these two treatises, I think I have shown sufficiently in these pages that this is not the case.

rejected. The perfection in what they obtain is then due more to the knowledge of natural things, or to wisdom, rather than to dialectic. Aristotle says, in Book Gamma, that dialectic has the same subject matter as philosophy, but differs by the *mode* of the ability (ἀλλὰ διαφέρει τῆς μὲν τῶ τρόπῳ τῆς δυνάμεως). Now, this is indeed a comparison for which Aristotle is clearly using the two last tools³ in a context that is non-dialectical and certain, yet without there being any question of demonstration.

Let us not forget that the tools, no less than the rest of dialectic, pertain first of all to a natural ability, prior to being perfected by art. Thus, if it is true, in imitation of the famous passage from the *Rhetoric*,⁴ to say that all men come up with simple probable statements, distinguish senses of words, and find differences and likenesses, and that the majority do so either by luck, or thanks to a disposition acquired through experience, while some truly proceed *orderly, easily and without error*, much more so than the others because they possess the art; among these, the best will be those who have a better knowledge of the matter in question. And that would be the case of the psychologist and of the wise who make use of the tools.

It remains that in the presence of arguments that appear to be rather certain, it is very difficult to judge whether such conclusions flow from a combination of dialectic and intuition, or from demonstration, or again, from a dialectic carried out once the conclusion is demonstrated. Aquinas, in fact, often mentions uses of dialectic after demonstration:

Huius igitur demonstrationem Aristoteles supponens a mathematico, utitur testimonio et signis, sicut consuevit facere post demonstrationes a se inductas. (*In de Coelo*, I 2 #14)

And he describes it as better than the dialectic that precedes demonstration:

dispositio se habet ad perfectionem dupliciter: uno modo, sicut via ducens in perfectionem; alio modo, sicut effectus a perfectione procedens. Per calorem enim disponitur materia ad suscipiendum formam ignis: qua tamen adveniente, calor non cessat, sed remanet quasi quidam effectus talis formae.

³ Aquinas places this fact in evidence quite well: 'Dialectici et sofistae induunt figuram eandem philosopho, quasi similitudinem cum eo habentes (...) Ad manifestationem autem primae ostendit quomodo dialectica et sophistica cum philosophia habeant similitudinem, et in quo differunt ab ea' (*In Metaph.* IV 4# 572).

⁴ See also *Soph. el.* 172a30-32: πάντες καὶ οἱ ἰδιῶνται τρόπον τινὰ χρῶνται τῇ διαλεκτικῇ καὶ πειραστικῇ· πάντες γὰρ μέχρι τινὸς ἐπιχειροῦσιν ἀνακρίνειν τοὺς ἐπαγγελλομένους.

Et similiter opinio, ex syllogismo dialectico causata, est via ad scientiam quae per demonstrationem acquiritur: qua tamen acquisita, potest remanere cognitio quae est per syllogismum dialecticum, quasi consequens scientiam demonstrativam, quae est per causam; quia ille qui cognoscit causam, ex hoc etiam magis potest cognoscere signa probabilia, ex quibus procedit dialecticus syllogismus. (IIIa q.9 a.3 ad2)

Moreover, even when one is clearly in dialectic, one does not always see exactly how the statements taken are destined to play the role of premises.

I hope that in those cases where Aristotle seems to be speaking with certitude, the imperfections in the analyses of the applications will be due, not to a deficiency in the explanation of the nature of the dialectical tools that has been suggested, but rather to an insufficiency in the knowledge of the matter in question. It is certainly not logic that holds the key to wisdom and that allows us to get a hold on life! For, to probe, meditate, take out the insides and tear apart a living thing, as we have been obliged to do here, has given a thousand chances for the spirit to slip away, and for our subject to die, as Goethe might mockingly remark, with reason. As to dialectical arguments, I will plead that it would have been necessary, with a view to continuing Pelletier's ground-breaking work, to consider the places, along with their interaction with the tools, in order to bring about a satisfactory and complete analysis. For, if the tool allows us to get probable *premises*, it remains that it only takes into consideration the probability of statements, and that it is the place that allows us to judge of their pertinence in relation to determinate problems.

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