Dialectic and Definition in Aristotle's Topics

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Dialectic and Definition in Aristotle's *Topics*

The middle term between dialectic and being is definition. Dialectic as an interrogative procedure (155b8) that employs likeness and difference (105a20-108b36) secures definitions (108b8, 20). Definitions are, fundamentally, formulae of essences (101b37, 1030a6-1031a14). Substance, then, is what is most definable. But one's view of substance will depend, therefore, on one's view of definition: what a definition is, and how it is acquired. Further, so far as definitions are arrived at through dialectic, one's view of definition will depend on dialectic. That is, the specific procedure of dialectic shapes the mode of definition, and the mode of definition shapes the notion of being. Not only does dialectic shape being through definition, but being, and also what is knowable about being, i.e., its essence and definition which captures this essence, also determines dialectic for being is the object with which dialectic deals. In short, these three things go together: dialectic, definition, being. The task of my paper is to explore this nexus and reveal the essence of Aristotle's philosophical dialectic.

Section I of my paper focuses on Book I of the *Topics* to show the intimate connections between dialectic, definition, and being and hence the contribution of the *Topics* to metaphysics and objective reality. Section II shows that in general, the remaining seven Books of the *Topics* support the thesis in Section I. Section III takes the connections of dialectic, definition and being further by showing a different kind of common opinion, a more primitive one made up of the *topoi* which allow Aristotle a non-circular way of getting at reality *via* his dialectical method.

Section I

This essay is significant because if my interpretation about the interconnection of dialectic, definition and being is correct, then Aristotle's dialectical methodology has heretofore been severely undermined. To assume as G.E.L. Owen in his "*Tithenai ta phainomena*" and T. Irwin in his analyses of both pure and strong dialectic in his *Aristotle's First Principles*, that dialectic, unlike demonstration, is not intrinsically connected to reality or observable facts, only raises doubts and problems about ever discovering objective truth or reality with this method. Others who might be more sympathetic with Aristotle's dialectic stress its usefulness to philosophical understanding when the knot from which it proceeds gets untied. However, the claim that Aristotle's dialectic is only useful because the *aporia* it employs forms the driving force of philosophical thinking, i.e., the *lusis* or unravelling of an *aporia* gives knowledge or insight, undermines the substantive contribution of dialectic to (i) our knowledge of the truth of being, and (ii) choice and avoidance in actions (104b1-3). Commentators such as Gilbert Ryle3 and John J. Cleary4 fall into such a camp of thinkers who

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1 Please note that this is only a first draft. Please send comments to Philmhs@vm1.uce.okstate.edu or to May Sim, Department of Philosophy, Oklahoma State University, Stillwater, OK 74078. Many thanks!


3 Gilbert Ryle "Dialectic in the Academy." (ibid).

4 John J. Cleary "Working Through Puzzles with Aristotle," *The Journal of Neoplatonic Studies*, vol. 1. No. II. I agree with Cleary's recognition that Aristotle's account of dialectic in his *Metaphysics* corresponds to his account of it in the *Topics*. However, our accounts differ in the following ways. Whilst he stresses the dialectical procedure (viz. his four stages for an adequate dialectical proof), and how the solution of the *aporia* preserves the truth of the most reputable opinions, I stress the metaphysical foundation of the dialectical procedure and such a foundation of the common opinions—i.e., the intimate relation between dialectic and being so that the concern of dialectic is not simply with the preservation of the most reputable opinions.
focus on the lusis of an aporia but ultimately undermine the true contribution of Aristotle’s dialectic.

Despite Irwin’s initial separation of dialectic from being, unlike Owen who rests content with the lack of objectivity, and unlike those interpreters who focus on the ‘pedagogic’ advantages of dialectic, he tries to explain how Aristotle’s dialectic can attain objective reality. He attempts to show that Aristotle’s dialectical method, though beginning from common beliefs, could proceed selectively from these common beliefs in his first philosophy to actually arrive at objective arguments for his first principles. Dialectic then, helps support Aristotle’s realist metaphysics rather than first principles which merely cohere with common opinions (viz. Irwin, 19). Despite my agreement with Irwin’s attempt to provide a defense of the objectivity of Aristotle’s dialectic, and hence the objectivity of the disciplines/fields that are dependent on such dialectical methods, I disagree with the way that Irwin goes about it.

Irwin’s method is to distinguish between ‘strong dialectic’ which he attributes to Aristotle’s later works such as the *Metaphysics* and ‘weak’ or ‘pure dialectic’ which he attributes to Aristotle’s earlier works such as the *Topics*. The difference according to Irwin between pure and strong dialectic is as follows. The former proceeds from common beliefs which the interlocutor is free to accept or reject, and aims only to achieve coherence amongst the common beliefs. The latter, though beginning from common beliefs, selects those beliefs which are based on the reality established in the *Metaphysics*. Consequently, to reject these selected beliefs would entail rejecting the explanation and understanding of reality provided by the *Metaphysics*. Irwin also maintains that strong dialectic aims not at coherence amongst common beliefs but rather at objective first principles. I disagree with Irwin’s distinction between ‘pure’ and ‘strong’ dialectic. I will raise doubts about Irwin’s distinction by showing that the *Topics*, one of the earlier works using pure dialectic according to Irwin, exemplifies the kind of dialectic he attributes to Aristotle’s later works, the *Metaphysics* being an instance of the later works. By raising doubts about Irwin’s attribution of pure or weak dialectic to the *Topics*, the following will result: (i) it is false that works such as the *Topics* or *Organon* lead merely to coherence of common beliefs and not to objective first principles, (ii) it is false that there is a clear break between Aristotle’s earlier and later works with regard to the dialectical method, and (iii) dialectic has always aimed at objective first principles and reality whether it accomplishes such a purpose or not. By this last point, I mean that the same method could have been practiced without guarantee that Aristotle had exhausted his investigations so that he was able to arrive at the results that dialectic is capable of attaining. Hence one could maintain that there is a difference in accomplishments, for instance, between the *Metaphysics* and the *Categories*, while maintaining that they used the same method.

Aristotle’s dialectic leads to an investigation of ‘what substance is’ or being *qua* being, i.e., first philosophy. To ultimately understand the connection between dialectic and first philosophy, let us first look at Aristotle’s definition of dialectic. As he puts it, “reasoning, on the other hand, is ‘dialectical,’ if it reasons from opinions that are generally accepted” (100a30-31). Since Aristotle here contrasts dialectical reasoning, which proceeds from common opinions, with demonstration, which proceeds from true and primary premises, which premises are supported by the “things themselves,” it seems easy to suppose that dialectic here (or what Irwin calls ‘pure’ dialectic) cannot get us to objective first principles. Irwin’s way out of this weakness of dialectic is to separate out a pure dialectic from strong dialectic. He holds that pure dialectic rests entirely on common opinions which aim at a systematic and coherent account of common beliefs (Irwin, 466), whilst strong dialectic rests on premises which we are not free to reject. We are not free to reject the opinions of strong dialectic for they rest on premises which correspond to an independent reality such that our rejection of them would lead us to lose the explanation and understanding that rest on Aristotle’s *Metaphysics* (viz. Irwin, 466-467).

I will show that the *Topics* already supports what Irwin calls ‘strong’ dialectic so that his attribution of pure dialectic to the *Topics* is untenable. In short, I will show that the Aristotelian propositions/problems for dialectical arguments/reasonsings in the *Topics* cannot be rejected freely. The reason one cannot reject these propositions are the following: (i) one would be giving up the very possibility of argument or reasoning since these problems or propositions are the subject matter of any reasoning whatsoever; and (ii) one would also be giving up the very being that is achieved through the dialectical method, which being in turn has
determined the method.

Irwin's distinction between pure and strong dialectic is mistaken because he fails to recognize the intimate connection between dialectic and being. Such a failure is exhibited in his willingness to separate (pure) dialectic from being, making it possible for the persons involved in the argument to freely reject any opinion. His attempt then to link dialectic and being in the *Metaphysics* seems to divorce dialectic from its foundation on common beliefs in order to achieve objectivity. The divorce of dialectic from common beliefs comes when he bases the objectivity of such a dialectic on the *Metaphysics* so that it is no longer the common beliefs that support the ensuing arguments (viz. 467). However, if objectivity is attained thus for Irwin, it comes at the expense of giving up dialectic, i.e., the beginning from *endoxa*. Consequently, Irwin never quite succeeds in convincing us that Aristotle's dialectic is philosophical and that it could achieve objective first principles.

My essay on the other hand, will show that the dialectical method spelled out in the *Topics* is already philosophical and hence metaphysical so that one does not need to wait for the *Metaphysics* (if indeed it is later). However, to say that dialectic in the *Topics* is already philosophical is not to say that it attains or fulfills its philosophical enterprise. It is perfectly consistent to say that the *Topics* is philosophical and has the same philosophical potential as the *Metaphysics*, without the *Topics* having to bring to full fruition its potential.

The first piece of evidence for the objectivity of dialectic in the *Topics* is that while setting up the materials for dialectical arguments, Aristotle starts with the subjects about which we reason. He says that the arguments are "equal in number" and "identical with the subjects, on which reasoning5 take place" (101b13-15). If the materials of dialectical arguments or reasonings are the same as the subjects of reasonings, then dialectical arguments or reasonings deal with the same reality as reasonings. So just as our reasonings are true or false depending on whether they capture the reality at which they are directed,6 so too there is correctness/wrongness and truth/falsity to dialectical reasonings or arguments. The standards of truth and correctness stem from the fact that dialectical arguments/reasonings are about the same objects as those of reasonings, which objects for Aristotle determine the truth and correctness of dialectical propositions. Hence, despite the fact that dialectical reasoning "reasons from opinions that are generally accepted" (100a30-31), due to the objectivity of its subject matter, the opinions from which it reasons are either true or false, correct or incorrect, depending on whether these opinions correctly capture reality. Sifting through common opinions and establishing the correct ones would then enable one using dialectic to achieve truth in her reasonings or arguments. As I have mentioned above, Aristotle distinguishes demonstrative from dialectic reasoning. Given that I am linking dialectic to objective reality, one might ask if I am not conflating two kinds of reasoning Aristotle distinguishes? Though I hold that dialectic, like demonstration, rests on reality, there is a difference between them and this difference lies in their respective beginning. Whilst demonstration starts from premises that are true and primary, dialectic starts from common beliefs that are closer to us. These common beliefs of dialectic could be examined, and if found untrue, discarded and true ones substituted in order that one arrives at a truth that is absolute and further removed from us (viz. 982a24-26).7

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5By "reasoning" Aristotle means "an argument in which, certain things being laid down, something other than these necessarily comes about through them." (100a25-27). He then divides such reasoning into demonstration on the one hand, and dialectic on the other.

6See *Nicomachean Ethics* VI.1 where reasoning is divided into speculative and deliberative. The former is true or false whilst the latter is correct or incorrect.

7In Section III, I will show that there is another more primitive kind of common opinion which consists in the *topoi* Aristotle uses. By describing these *topoi* as primitive common opinions I mean to convey their fundamentality and all pervasiveness to our thinking about reality. These are indeed common opinions (*endoxa*) in that they are inseparable from our perception of reality due to their being aspects of reality. Contrary to the more developed opinions
That Aristotle believes in the objectivity of the outcome of dialectic is apparent in the following. In Book I.18 of the *Topics*, Aristotle speaks about the usefulness to clarity of examining the various meanings of a term. Such an examination ensures that "our reasonings shall be in accordance with the actual facts and not addressed merely to the term used" (108a17-22). In Book I.11, he speaks of the contribution of dialectic to "choice and avoidance, or to truth and knowledge" (104b2). Last but not least, dialectical propositions or problems are constituted by definitions and definitions capture a thing's essence (101b38). Hence, by procuring the right propositions or problems through correct definitions, the outcome of dialectical reasonings would also be objective. This means that dialectic is able to provide us with truth and knowledge about reality rather than a bunch of opinions which merely cohere.

Given the significance of the reality of dialectic, what then is this reality? Aristotle begins answering this crucial question in Book I.4 of the *Topics*. He holds that dialectical arguments begin with propositions or problems (101b15, 104a3-4), and reasonings reason about problems. However, propositions and problems are similar in that they are constituted by the following four elements. Namely, the elements are a property, or a definition, or a genus, or an accident. It is noteworthy that the four elements together, i.e., in some combination, rather than each taken by itself, constitute propositions or problems. The significance of this point for Aristotle is that definition is the focus of all these elements so that directly or indirectly, even the elements apart from definition, tell us about definition (viz. *Topics* I.6).

Let me first elaborate on these four elements which constitute the propositions and problems of dialectical reasoning and the problems of reasoning. These four are extremely important elements because they contribute to our understanding of 'what something is', be the thing in question a substance or essence, or any of the other nine categories of quantity, quality, relation, place, time, position, state, activity, and passivity (viz. *Topics* I.9 103b23-24).

Aristotle maintains that every proposition and problem tells us about a genus, or a peculiarity, or an accident. What is peculiar is in turn divisible into that which tells us something's essence and hence is a definition; and that which does not tell us the thing's essence though it belongs to the thing alone. This latter is called a property. Both a definition and a property are predicated convertibly of the thing (viz. *Posterior Analytics* I.22, 83a23-24, *Topics* 102a18-20). An example of the convertibility of the subject and predicate of a definition is: a man is a rational animal and a rational animal is a man. An example of the convertibility of the subject and predicate of a property is the property of learning grammar and man. Aristotle says, "...if A be a man, then he is capable of learning grammar, and if he be capable of learning grammar, he is a man" (102a20-21). These two elements, i.e., a definition and a property constitute in part the kind of materials from which dialectical reasonings start. For instance, the definition of man can constitute a dialectical proposition that are open to arguments and to the possibility of being rejected, these *topoi* are the very ways to arguments and are never themselves open to be argued about. Similarity and difference for instance is one such *topos* which essential work in establishing reality we will see in this Section. The reason such a *topos* is so essential to establishing reality is that reality is constituted by sameness and difference. These *topoi* that make up our primitive opinions differ from the premises of demonstrations in that they are not yet premises but the materials from which premises could be generated. They are similar to the premises in so far as these *topoi* too are true and primary.

Aristotle says, "For arguments start with 'propositions,' while the subjects on which reasonings take place are 'problems' (101b15-16). Even though Aristotle distinguishes propositions from problems, the distinction is not relevant to the aspect of dialectic of which I am discussing because I am only dealing with the materials of dialectic and Aristotle includes both propositions and problems as the materials of dialectical inquiry (viz. 104a3-4). The difference between propositions and problems is simply a turn of phrase—the former proposes a thesis and immediately asks for an assent or dissent whilst the latter incorporates the thesis into the question. Aristotle's example of a proposition is as follows: "An animal that walks on two feet" is the definition of man, is it not? (Notice the assertion followed immediately by the question here). His example of a problem about the same subject is: Is "an animal that walks on two feet" a definition of man or no? (Notice the incorporation of the assertion into the question from the beginning here).
as follows: "An animal that walks on two feet" is the definition of man, is it not?" (101b30). Whether such a proposition is examined dialectically then depends on whether the thesis involved is one that is puzzling to those who need argument (105a2-4, viz. 104a3ff or chapter 10). More will be said about the contribution of puzzles to dialectic in first philosophy for Aristotle later.

A genus is another one of the four elements which contributes to our understanding of 'what something is'; it is a predicate in the category of substance/essence. Aristotle's example is that by predicating "animal" of man and of ox, we are arguing that they are in the same genus. Such a proposition contributes to dialectical arguments because if we could show that "animal" is "the genus of the one but not of the other, we shall have argued that these things are not in the same genus;" (102b1-3) and hence come to better know what each is. Finally, Aristotle defines an "accident" as "something which may possibly either belong or not belong to any one and the self-same thing, as (e.g.) the 'sitting posture' may belong or not belong to some self-same thing" (102b4-7). An accidental predicate, like the previous three, contributes to dialectical reasoning because the recognition that such a predicate is not necessarily predicated of a thing allows one to see the falsity in an opinion which attempts to make a universal proposition from such an accidental predication. Finally, by knowing that an accidental predicate may or may not belong to something also contributes to our knowledge of what a thing is.

Knowledge of the definition of a thing,(a knowledge to which all four elements discussed contribute) is crucial because Aristotle stresses time and again that people cannot argue dialectically unless they are directed at the same thing or the actual fact (Topics I.18, 108a17-23, 105a31-33). Given that to know whether interlocutors are directed at the same thing depends upon knowing the essence of the thing, which knowledge is provided by the four elements, Aristotle holds that these four elements are the sources or materials of all dialectical arguments or reasonings. It is clear how the definition helps us know the essence of a thing. But the other three elements, namely, the genus, property, and accident also contribute to our grasp of the definition because they can destroy the definition if the propositions they make up are proven otherwise. As Aristotle puts it,

We must not fail to observe that all remarks made in criticism of a 'property' and 'genus' and 'accident' will be applicable to 'definition' as well. For when we have shown that the attribute in question fails to belong only to the term defined, as we do also in the case of a property, or that the genus rendered in the definition is not the true genus, or that any of the things mentioned in the phrase used does not belong, as would be remarked also in the case of an accident, we shall have demolished the definition; so that, to use the phrase previously employed, all the points we have enumerated might in a certain sense be called 'definitory' (Topics, I.6, 102b27-35)

The lesson to be gathered from Aristotle's discussion of the contribution of the four elements to the propositions or problems of dialectic is that dialectic gets its materials from being itself and other aspects of being—namely, its genus, property, accident, and definition. The being that is revealed in the Topics is an objective reality that is accessible to us. In a sense, it has already been revealed to be an objective reality by Aristotle's stress on the four elements which capture this reality. Aristotle's talk of definition which captures the essence or the 'what it is' of something shows that there are things with essences in the world. For instance, he tells us that the investigation of sameness and difference helps us define things and recognize what a particular thing is (viz. 108a36-108b25). Given that the genus captures the sameness of different objects, it too contributes to the definition. By the same token, insofar as recognizing the differentia proper to a thing (108b6) entails recognizing the things that are peculiar but not essential (i.e., properties) and those that are accidental, again the other three elements are directly or indirectly definitory. Not only is the objective reality from which dialectic gets its materials apparent from Aristotle's talk about the four elements, but that dialectic, could reach and deal with this reality is also revealed in this discussion. By examining the predicates that tell us what something is, and distinguishing such predicates from those which might seem
to tell us what something is but really just capture the thing's properties or accidents, dialectic is the procedure that distinguishes for us a thing's essence and its inessential aspects. Once we know a thing's essence, through investigations of sameness and difference, we can then go on to categorize this thing with, or separate it from, others, and come to know more about its other aspects.

The further fact that Aristotle is not just dealing with words or opinions without an objective reality is evident when time and again he tells us to get clear about the various senses a term might be used so that we are clear about the various aspects of reality, or what he calls the "differences of things" (105a33), to which the same term might be applied. Clarifying these sameness and difference will ensure that we are directing our minds at "actual facts" (108a21) or at "the same thing" (108a23). In fact the whole of Book I.15 of the Topics consists in different ways of examining if a term has several meanings or one. His examples here attest to the fact that if a term has several meanings, it is mostly due to its application to various realities, e.g., 'to have sense' has more than one meaning when applied to body and soul respectively (106b21-25). Further, 'clear' and 'obscure' mean differently when applied to sound and colour (106a24-28). The dialectical investigation of sameness and difference then is one that gives us the definitions of things and hence gives us beings that are objective due to the objective sameness and difference these definitions capture. At the same time, dialectic for Aristotle proceeds in the way it does, examining sameness and difference, employing the four elements because being itself is so structured that there are sameness and difference exhibited by these four aspects. Hence the dialectical procedure of (i) focusing on definitions which capture essences, genera, properties, and accidents; (ii) looking to sameness and difference to ascertain whether we are dealing with the same thing or different things; and (iii) looking at the various senses of a term (again using sameness and difference) to ensure that we are using the same sense and hence directing our minds at the same thing; are all ways which are determined by the things in the world, by their various aspects, and by their relations with other things.

By showing the objectivity of the reality which forms the material or subject matter of Aristotelian dialectic, we see then that dialectic in the Topics already proceeds from common opinions that are based in reality and hence they cannot be rejected without risking the possibility of giving up intelligible arguments or being. The possibility of intelligible arguments would be risked if one rejects correct dialectical propositions freely because one would end up not being able to argue at all, not having any subject matter about which to argue. Given that dialectic gives us being through definition and hence helps make reality intelligible, we would also be giving up such an intelligible reality if we just rejected correct dialectical propositions freely.

Having shown the interdependence of dialectic and being through analyzing Aristotle's view of definition in the Topics, it now remains for me to show that dialectic is intrinsically philosophical or metaphysical. Recall that Aristotle's claim is that "Not every problem, nor every thesis, should be examined, but only one which might puzzle one of those who need argument..." (105a2-4, cf. 1006a6-10). Given that we could get definitions capturing the essences not only in the category of substance, but also in the other nine categories of quantity, quality, relation, place, time, position, state, activity, and passivity, one of the puzzles that arises concerns "what is primary amongst these essences?" Questions regarding the primacy of substance or essence and questions such as "What is being?" and "Is being one or many?" arise as puzzles not only from Aristotle's own dialectic leading to definitions in the ten categories, but also from Aristotle's predecessors' arguments (viz. Met. I.3-10) supporting both the oneness and plurality of being. Given that the dialectic procedure is one that investigates these puzzles through investigating sameness and difference, priority and posteriority, motion and rest, the sensible and non-sensible, etc. (viz. Met. III.1, 995b5-26), it is intrinsic to this method to deal with the subject matter of being qua being, i.e., the question of first philosophy.

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9 Viz. Topics 1.7 where Aristotle discussed the various senses of 'sameness' which senses correspond to the structure of being, i.e., being that is categorized by predicating of it its genus and species etc (cf. VI.4, VI.7,146a-13, 21-33, VI.13-14, 150a15-22, VII.1, 151b28-152b35).
The investigation of being qua being would lead to what primary substance or essence is because it is the primary that is knowable and upon which all else depends for their names (viz. Met. 1003b16-17, cf. 1003b31-33 taken with 1004a11-28).

Dialectic then, is philosophical because it proceeds from common opinions about reality, which common opinions attempt to capture the definitions of reality. Such definitions however go on to constitute propositions or problems that are puzzling due to the convincing and yet conflicting ways in which one's predecessors have argued about what is real. Since it is the task of metaphysics to study being qua being, i.e., what is essentially being, and dialectic provides the materials and ways to study being, dialectic is essentially metaphysical and philosophical in the sense that it studies first philosophy.

In Section I, I have focused on Book I of the Topics to show that dialectic aims at definitions and definitions capture the essences of things in the world. Such a task was accomplished by looking at the connectedness between the four elements of a property, a definition, a genus and an accident; especially the relevance of each of these elements for the discovery of the definition. At this point, it is important that I show in Section II that the remaining seven books of the Topics support the significant role played by definition and being in Aristotle's dialectic. In Section III, I will show that the topoi in these remaining seven Books also provide the tools which allow Aristotle to achieve definitions of essences in a non-question begging way. The reason for this latter argument is that an opponent to my view might, at this point, say that I'm simply using Aristotle's own definition of substance and definition in the Metaphysics to establish that such a definition gets at substance or being. It might also seem that I'm relying too much on the Metaphysics to provide me with the foundation to being and hence, there might not be such a great difference between Irwin's view and mine. So what I will try to show is that the topics which Aristotle discusses in the rest of the seven chapters of the Topics provide him with the ways to determine a genus, a property, an accident, and a definition. I have already alluded to one of these topoi, namely, that of sameness and difference earlier on. But I shall show how some others of the many hundreds of topón work as independent means to determining each of these four elements as well as how they are the bases upon which these four elements rest.

Section II

At first glance, the structure of the rest of the seven Books of the Topics seems to support my claim regarding the focus of this treatise on definition and being. For instance, Book II of the Topics talks about accidents. Not only does this chapter deal with ways of investigating into whether an accident is correctly predicated of a subject, it starts out by discussing the difficulty of conversions with respect to accidental predication and how such conversions must be "based on the definition, and the property, and the genus." (108b13) Such a distinction between conversions in accidental predication and those predications of definition, property and genus supports the differences Aristotle establishes between accidents and the other four elements which ultimately help in the determination of definitions. Book III of the Topics on the other hand, does not seem at first sight to support any of the four elements, especially definitions, for it deals with comparisons between two or more closely related things and the showing of the superiority of one over the other(s) and hence its choiceworthiness. Nevertheless, this Book too is intimately bound up with definition and being for it lays bare the superiority of things such as peculiarity over commonality (117b30), and the superiority of things gotten from his discussions of the greater and the less (119b16ff) and the good and the bad (119b30ff) when applied to genera. These comparisons and standards or rules for determining which if two (or more) things is indeed more choiceworthy allows us to understand why a particular quality is selected as the differentia and another selected as the genus for these are the qualities that are more important or more choiceworthy absolutely. Most importantly, I see Book III as the foundation of Aristotle's criteria in his ethical works and his Metaphysics for it reveals the way to the determination of the hierarchy of goods. Books IV and V of the Topics explicitly support my reading and discussion thus far that definition is the focal point of Aristotle's discussions about these four elements for he mentions that a genus and a property are elements which relate to definitions. As Aristotle puts it in the opening sentences of Book IV, "The next
questions which we must examine are those which relate to genus and property. These are elements in questions relating to definitions, but in themselves are seldom the subject of inquiries by disputants." (120b12-15) Books VI and VII too, since they are devoted to the discussion of definitions again support my reading that the *Topics* is directed at the investigations of being and definitions. It is noteworthy that Aristotle devotes two Books to the discussion of definition which is a good indication that definition plays an important role in dialectic.

Book VIII of the *Topics* at first sight seems not to support my reading that the *Topics* is directed at definition and being and that dialectic is always already philosophical in this search for being. This is because it starts out with a comparison and contrast between the philosopher and the dialectician. He says, "(a)s far as the choice of ground (topon) goes, the philosopher and the dialectician are making a similar inquiry, but the subsequent arrangement of material and the framing of questions are the peculiar province of the dialectician; for such a proceeding always involves a relation with another party," (155b7ff) whilst the philosopher is not as interested about directing his materials at another. Given such a claim, and that Aristotle goes on to discuss the formulation or arrangement of materials and roles played by the questioner and the answerer (chapters 1-8), one can see why certain interpreters claim that the *Topics* is simply a handbook of strategies for the dialectician and that the dialectician is to be sharply distinguished from the philosopher. Nonetheless, even in this Book, despite the appearance that it is directed at the dialectician, deals significantly with how philosophers proceed, the role played by definitions and the definability of first principles, and ultimately, with the significance of such procedures for philosophical knowledge and wisdom.

Since Aristotle maintains three uses of dialectic, we need to ask if these different uses of dialectic affect his distinction between the philosopher and the dialectician. More specifically, the three uses of dialectic that Aristotle recognizes are as follows: dialectic—for the sake of mental training (pros gymnasian), for the sake of conversations or public encounters (pros tas enteuseis) and for the sake of philosophic sciences (pros tas kata philosophian). Since there are three uses of dialectic, it isn't clear that he is referring to philosophical dialectic when he says something about dialectic. Hence, with respect to the above contrast between the philosopher and the dialectician, he could very well be contrasting the philosopher (dialectician) with those who employ dialectic for public encounters and for mental training so that whilst the other two kinds of dialecticians concern themselves with an other interlocutor, the philosopher dialectician does not. Taking Aristotle's own advice in this treatise, one should distinguish various uses of dialectic and understand that he might be distinguishing the nonphilosophical uses of dialectic with the philosophical uses. To

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10Eleonore Stump, for instance, sees a topic in the *Topics* as a strategy for arguing so that the *Topics* is simply "a handbook on how to succeed at playing Socrates." (173) So she claims that teaching one to be good at dialectical disputation is the technē that this handbook wants to teach (viz. Boethius's *De topicis differentiis*, Cornell University Press (1978):p. 159-178). J. D. G. Evans also believes that dialectic and ontology have to be sharply distinguished for Aristotle (viz. *Aristotle's Concept of Dialectic*, Cambridge University Press, (1977): p. 36). Barnes too says that Aristotle's Method of endoxa "has, in the last analysis, very little content." ("Aristotle and the Methods of Ethics" Rev. Int. de Phil. vol. 34 (1981): 510). E. Weil in "The Place of Logic in Aristotle's Thought," surprisingly, also agrees with the *Topics* lack of content for he says, "It goes without saying that even topics contains no ultimate criterion of truth. Topics too is purely formal, in the sense that it applies its procedures indiscriminately to any affirmation: truth depends on immediate intuition, either perceptual or intellectual." (94) Again, Weil interprets the place of the *Topics* in philosophy as "a procedure for discovering the problems—not the solutions—which present themselves to the philosopher in the course of his daily life." (93) The reason I find such remarks surprising for Weil is that he seems to recognize the value of the *Topics* for getting at truth, or extracting truth from common opinions (viz. 97, 99, 103, 107). Most insightful is his suggestion that one ought to study the relations between topics and ontology. He says, "Now it is clear that topics and ontology are simply two aspects of one reality: Aristotle says as much himself in one remarkable chapter (*Top. IX 9, 170a20ff*); and this is corroborated by the part played in both disciplines by such fundamental notions as substance, accident, property, genus, and definition." (108) (Articles on Aristotle, vol. 1 eds., Barnes, Schofield and Sorabji. Duckworth (1975): 88-112)
emphasize the difference then, he does not use "dialectic" to talk about philosophy in this context.

However, evidence that he is still dealing with philosophical dialectic in this Book, which first eight chapters deal with the roles played by the good questioner and answerer, is present in VIII.5. That Aristotle is dealing with philosophical dialectic in Book VIII.5 is clear when he speaks of how there are no rules for those who use dialectic for the sake of experiment (peiras) and speculation or inquiry (skepseos) whilst the rules for those who discuss for the sake of didactic, and competitions are clear. (159a25ff) He continues by saying, "since then, we have no traditions handed down by others, let us try to say something ourselves on the subject." (159a36-37). Thus he proceeds to provide the rules for being a good answerer in a philosophical dialectic. More importantly, that the philosopher is ultimately also concerned with being good at questions and answers so that the initial distinction between the philosopher and the dialectician with respect to their relations to another party is taken away is evident when Aristotle, in talking about training in dialectic in the last chapter of Book VIII, talked about the importance of examining the arguments both for and against when dealing with any thesis. Once both sorts of arguments have been laid bare, he spoke of seeking the solution immediately. Thus he says, "If we have no one else with whom to argue, we must do so with ourselves." (163a3) Thus even the philosopher plays the part of another party and Aristotle's own dialectical procedures, just consider Metaphysics Z.13 for a stark example, attest to the importance of arguing against oneself or playing one's own opponent.11 All these are consistent with Aristotle's talk about the usefulness of dialectic for philosophical sciences in Book I.2 when he says, "For the philosophic sciences it is useful, because if we are able to raise difficulties on both sides, we shall more easily discern both truth and falsehood on every point." (101a35-36). Such a remark also reminds us of Metaphysics B.1 when he spoke of the importance of knowing the knot and hearing both sides in order to be a good judge and one who is prepared for the solution. (995a24-995b4) And this is why Aristotle spends the most of the Topics talking about ways of coming up with constructive and destructive arguments. It is significant that Aristotle talks about both constructive and destructive arguments because it is only when one could argue for both sides that the mind could become perplexed and thus more "easily discern both truth and falsehood on every point." (101a36) Again, it is for the discovery of truth, rather than for the sake of just winning an argument that Aristotle has in mind in coming up with these materials for arguments.12 (viz. Topics II)

Thus I do not think that the Topics is simply a handbook of strategies that is pure form without any matter. Contrariwise, the Topics provides us with ways of coming up with arguments, which ways are intimately bound up with the way the world is and the truth that is accessible through these ways because these topoi allow us to arrive at definitions. That Aristotle stresses the importance of amassing "an abundance of material" (163a5) for arguments is not to be undermined. The fact that definitions form a significant role

11E. Weil too recognizes that Aristotle is still dealing with philosophical dialectic in this Book As Weil puts it, "The dialectical exercise, which has immense philosophical value (for in Aristotle's view the technique of formulating questions, of finding 'places' for attack and of arranging them in their proper order is common to the philosopher and the dialectician: Top. VIII 1 155b3ff.) can only be brought to a successful conclusion by a thinker on his own if he plays both parts: if he cannot find an interlocutor he must raise objections against himself..." Again Weil says, "True dialectic—topical, peirastic dialectic—is analytic technique used in the examination of a thesis that is commonly received or otherwise celebrated, an examination that is undertaken as a common task by two or more men in search of the truth." (99)

12The fact that Aristotle is concerned to provide both constructive and destructive arguments shows that J. D. G. Evans is mistaken when he claims that dialectic is different from philosophy because whereas philosophy is scientific, dialectic is tentative. Dialectic is tentative for Evans because he says that "dialectic can demolish claims to knowledge but positively it is unable itself to produce knowledge." (12) Given that Aristotle is concerned to provide constructive arguments shows that dialectic is indeed helpful towards our discerning truth too and not only falsehood. Aristotle deals explicitly with both constructive and destructive arguments at Book II.3, 4, at the end of 7, and at the beginning of 8 and 9; Book III.6; Book IV.1-6; Book V.2-9; Book VI.2-13; Book VII.1-5; just to name a few cases.
in such materials is evident when he says "(m)oreover, you should have a good supply of definitions and have those of familiar and primary ideas ready to hand; for it is by means of these that reasonings are carried on." (163b20-23) More will be said about definitions shortly. But first, these materials of which he speaks not only lay bare the problems and make us see clearer what is at stake but they also lead us to philosophical knowledge. As Aristotle puts it

Also to take and to have taken in at a glance the results of each of two hypotheses is no mean instrument for the cult of knowledge and philosophic wisdom; for then it only remains to make a correct choice of one of them. For such a process one must possess a certain natural ability, and real natural ability consists in being able correctly to choose the true and avoid the false. (VIII.15 163b9ff)

Here again, the significance lies in Aristotle's talk of how this method leads to philosophic wisdom and the choice of the truth by laying bare the possibilities embedded in the arguments so that one could see clearly and make a choice of the truth. Dialectic then, as I have already pointed out earlier, aims at the actual facts or truth and hence it is always already philosophical.

Even more striking than this directedness of dialectic toward truth and being is the importance of first principles to dialectic and how dialectic could get at such first principles via definitions. For the relation between definitions and first principles, see the whole of VIII.3 (158a30-159a14). Let me cite a passage from VIII.3 regarding definitions and first principles to show the place of such relations for dialectical arguments:

The same hypotheses may be both difficult to attack and easy to defend. Both things which are by nature primary and things which are by nature ultimate are of this kind. For things which are primary require definition and things which are ultimate are reached by many stages if one wishes to establish a continuous train of proof from primary principles, or else the arguments have the appearance of being sophistical; for it is impossible to demonstrate anything without starting from the appropriate first principles and keeping up a connected argument until ultimate first principles are reached. Now those who are being questioned do not want to give definitions nor do they take any notice if the questioner gives them; and yet it is difficult to argue if what is proposed is not made clear. This kind of thing is most likely to happen in the matter of first principles; for, whereas it is through them that everything else is made clear, they cannot be made clear through anything else, but everything of that kind must be made known by definition. (158a30-158b4 my italics.)

It is clear from this passage that arguments regarding things that are primary and ultimate require first principles which are known by definitions and hence we need to proceed from definitions. But stress on the universality of definition comes at the end where he talks about the importance of first principles for making clear everything and how these first principles are known by definition. Since it is the task of first philosophy to get at first principles, again, we come to see that dialectic is philosophical for it gets at these first principles via definitions.13

13Evans notices that the concepts of the same and other, like and unlike, contrariety, priority and posteriority which are mentioned in the Metaphysics (995b21-2) are "prominent" in the Topics. For instance, he says, "Questions about whether two things are the same or other are said to fall under the same heading as questions about definition and are treated in Top. H1-2; and in Top. A7 we are given an analysis of the senses of 'same'. The notions of similarity and contrariety provide topics in the discussions of accident, genus, property, and definition...Priority and Posteriority play an important part in the discussions of property and definition." (38-39) Nonetheless, Evans claims that "no special emphasis is placed in the Topics on the use of these concepts in dialectic." (39) The detailed discussion of these topics
Section III

My next task is to show how the *topoi* are the tools Aristotle uses to determine the four elements. I have already discussed the significance of sameness and difference as a *topos* for coming up with definitions in Section I. (cf. 102a7ff, 103a6ff, and 1.7-10) Let us see what other *topoi* are available to Aristotle for in Section III that follows should show how all pervasive the use of these notions is in Aristotle's dialectic.

Another more significant objection Evans raises is that dialectic fails to recognize that "the universal characters—same etc.—are attributes of Being qua Being" and hence fails to treat them in such a way that shows the primacy of substance. (15) Evans cites *Met.* K3, 1061b4-11 saying that "dialectics and sophistry deal with the attributes of existing things, but not of things qua Being, nor do they treat of Being itself in so far as it is Being" to substantiate his point. This reference, however, is not helpful to Evans for Aristotle recognizes at least three uses of dialectic and it isn't clear that he is talking about philosophical dialectic in this context. (cf. p.8 of this paper) Besides the "*kai*" linking dialectics and sophistry could mean "as" rather than "and" such that the sameness or likeness of the dialectical and the sophistic practice is being emphasized. (cf. Evans, p. 14n27) Evans cites another passage in *Met.* Mu.4 (1078b23-30) to support his claim that Aristotle's criticism of Socrates' dialectic is that it is too bound up with definitions. Evans says that Aristotle holds that if Socrates "had practiced dialectic *properly*, he would not have attempted to make definition the basis of his reasoning." (25) It is important to note that this passage which Evans cites lies in a context where Aristotle has just been talking about some of the presocratics and adherents to the theory of forms. It is questionable if Aristotle meant to dissociate dialectic from definition since in this context, it seemed that he is praising Socrates. For Aristotle says, "There are two innovations which may fairly be ascribed to Socrates: inductive reasoning and general definition. Both of these are associated with the starting-point of scientific knowledge." (1078b27-30) So to say that Socrates is still seeking definitions and hence definitions should be put down and dissociated from dialectic is not a logical conclusion. After all, how is one to get to first principles if one does not engage in definitions? How is one to construct arguments if one does not define? For Aristotle says, apart from the passage I just cited from the *Topics*, (above) "...it is through definitions that we get to know each particular thing..." (998b5). Even the passage Evans himself quoted speaks of the importance of definition to logical reasoning. Quoting 1078b24-5, Evans writes "for he was trying to reason logically, and the starting-point of all logical reasoning is the essence."

More importantly, I think that Evans' impression that Aristotle is criticizing Socrates' dialectic stems from Aristotle's statement that "At that time there was as yet no such proficiency in Dialectic that men could study contraries independently of the essence and consider whether both contraries come under the same science." (1078b25-27) Evans took this statement to mean that true dialectic would study contraries independently of essences or definitions. But such a reading does not seem consistent with Aristotle's immediate criticism of the Idealists who separated definitions and universals. As Aristotle puts it, "But whereas Socrates regarded neither universals nor definitions as existing in separation, the Idealists gave them a separate existence, and to these universals and definitions of existing things they gave the name of Ideas." (1078b30-34) Aristotle's continual criticisms against these adherents to the theory of forms who separate definitions and universals for the rest of this chapter and the next chapter shows that he is *against* such separation. So when he said of Socrates and the other presocratics that they were not proficient enough in dialectic separate definitions from the essences of existing things, he was just being sarcastic. It was, according to Aristotle, a good thing that they didn't make such a separation.

Robert Bolton, like Evans, also seeks to undermine the role of definition in Aristotle's *Topics*. He examines three types of definition in the *Posterior Analytics* (143ff) and claims that these three types of definitions are absent from the *Topics* (147). Bolton recognizes though, that Aristotle talks about two kinds of definitions in the *Topics*, namely, definitions which are made by reference to what is more intelligible to us, and those that are by reference to what is more intelligible absolutely (141b3ff) But Bolton focuses on Aristotle's rejection of the former as definitions. By saying that the former should not be the kind of definition at which one aims, however, need not mean a total rejection of this method. All Aristotle is saying is that the latter is the true definition for which we are looking. So there is not a great distinction between his downplaying those definitions which are made by reference to what is more intelligible to us, and the hierarchical ordering of the three types of definition Bolton himself mentions. (viz. "Definition and Scientific Method in Aristotle's *Posterior Analytics* and *Generation of Animals*" in *Philosophical Issues in Aristotle's Biology*, eds., Gotthelf and Lennox, Cambridge University Press (1987). For the significance of Aristotle's *Topics* for the understanding of the *Analytics*, see E. Weil's "The Place of Logic in Aristotle's Thought."
coming up with materials for arguments for and against something or for coming up with aportai essential for the discovery of truth or being. The detailed discussion of these selected topos are essential to showing that they are not simply form without content nor are they simply arguments to be consistent with common opinions or with the appearances that need saving. Rather, these detailed expositions serve to show how each topos and its permutations (a) provide the materials for arguments; (b) generate arguments for and against certain predications; and, (c) contain the answer one way or another with respect to the four elements of genus, property, accident, and definition.

Consideration of the topic of greater and less degree, for instance, provides us with four arguments. In Book II, Aristotle tells us that the first such possible argument from considering greater and less degree with respect to accidents is to see if the increase in the subject is followed by an increase in the accident. If this happens, then the accident really belongs to the subject, and if not, then it does not so belong. The second argument stems from considering the case where one accidental predicate is applied to two subjects. Here, Aristotle tells us that if this predicate does not belong to the subject to which it is more likely to belong, then it follows that it also does not belong to that to which it is less likely to belong. On the other hand, if the predicate is applied to something to which it is less likely to belong, then it is also applied to that to which it is more likely to belong. The third argument comes from considering two accidental predicates when applied to one subject. Like the second, if the one subject to which one of the predicates belongs more generally does not have this accident, it also follows that the predicate which belongs less generally does not belong. On the other hand, if the less generally belonging accident belongs, then so does the more generally belonging accident. Finally, the fourth argument stems from considering the case when two predicates are applied to two subjects. If the predicate that more generally belongs to one of the subjects does not belong, then neither does the predicate that belongs less generally to its subject belong. Whilst if the predicate that less generally belongs to its subject belongs, so does the predicate that belongs more generally to its subject belong. By using these four arguments that stem from considering the greater and the less with respect to accidents and their frequency in subjects then, Aristotle is able to determine if the accidents under consideration are accidents of the subjects under consideration. Notice that the topic of the greater and the less and its permutations not only allows Aristotle to generate materials for arguments, but these arguments also reveal if a particular accident actually belongs to a subject.

That this topic of the greater and less degree is also used in his consideration of properties is clear when we look at 137b14ff-138a29, and its use in his consideration of definitions is evident in 146a3ff and 152b6. Let us look at the greater and less degree in considering properties first. At 137b14ff Aristotle tells us that if the greater degree of the predicate fails to be a property of the greater degree of subject, then neither will the less degree of the predicate be a property of the less degree of the subject and such a negation applies to the least degree, the greatest degree and to the application of the property to the subject simply (haplês). He gives the example of colour. He says, "since to be more coloured is not a property of what is more a body, neither would to be less coloured be a property of what is less a body, nor would colour be a property of body at all." (137b17-20) This is an instance of a destructive argument. For constructive purposes, one must check

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14Robert Bolton claims that the most that dialectic requires is that one provides an account which is "consistent with a certain dialectically defensible body of received opinion." Such a procedure, Bolton argues, is different from that given in the Analytics where one is concerned to provide an explanation of why certain things are true of something else.(166) Like Cleary and Bolton, M. Nussbaum too is concerned with the preservation of reputable opinions. She claims that "The method of appearance-saving therefore demands that we press for consistency." (277) (viz. "Saving Aristotle's Appearances" in Language and Logos, eds., M. Schofield and M. Nussbaum, Cambridge University Press (1982): 267-293. Though I agree with Nussbaum that we move, for Aristotle, from appearances to giving an account or a definition, I disagree with her in her reliance on the experts in such accounts. To make it the subject matter of particular sciences to tell us about reality in general too is to take the activity of searching for this reality out of the hands of the dialecticians and philosophers and hence to undermine the contribution of dialecticians in the study of metaphysics.
if a greater degree of the predicate belongs as a property of a greater degree of the subject. If so, then a less
degree of the predicate will also belong as a property of a less degree of the subject, and such a belongingness
of predicates to subjects applies to the least degree, the greatest degree, and to the simple belongingness of
the property to the subject. He gives the example of an increase in degree of sensation as a property which
corresponds to an increase in degree of the living thing. Next, for destructive purposes, one could move from
simple predication to the more and the less so that if the predicate simply does not belong as a property to the
subject simply, then neither would the more and the less degree. By reversing this procedure, one comes up
with constructive arguments. That is, if the predicate simply belongs as a property of the subject simply, then
so would such belongingness apply to the greater and less degree. Next, one could see if the more fails to
belong to the more as a property, in which case neither would the less belong. One could reverse this to get
the constructive argument; i.e., if the less belongs as a property of the less, then so would the more. The next
way is to investigate if the property fails to be predicated of that of which it is to a greater degree a property.
If so, then neither would that property be predicated of that of which it is a lesser property. (This one has no
constructive correspondence). Finally, one could see if what is to a greater degree a property of the subject
fails, for then neither would what is to a less degree a property belong. Reversing this, one gets the
constructive argument. That is, if what is to a less degree a property belongs to the subject, then so would
what is to a greater degree. To look at the above arguments in a different way, one could look at the
permutations Aristotle employs with respect to the property and the subject using the topic of the greater and
the less.

1. Increase degree of predicate and increase degree of subject. For destructive arguments, consider failure,
i.e., if the former fails to belong from such an increase, it would fail with increase, decrease, and simply. For
constructive arguments, consider success of predication.
2. Consider simple predication. For destructive arguments, if simple predication fails, so would any variation
in degree. For constructive arguments, if simple predication holds, then so would any variation in degree.
3. Argue from the more to the less and vice versa. If the more does not belong to the more, neither would
the less belong to the less. If the less belongs to the less, so would the more.
4. Argue from the same predicate with respect to different subjects which difference stems from its being
more or less a property of these respective subjects. Argue from the predicate that is to a greater degree a
property of a subject to this same predicate which is to a less degree a property of another subject. Consider
failure of the greater for destructive arguments. There is no constructive arguments from this topic.
5. Finally, argue from a predicate that is to a greater degree a property of a subject to one which is to a less
degree a property of this same subject. Reverse for constructive argument.

From permutations (1) and (2) above, one can see that simple predication is intimately bound up with
variation in degrees when it comes to predicking a property of a subject. Hence, by considering such
variations in degree of subjects and predicates, one can test if what is asserted to be a property is indeed a
property of the subject. The more and the less then, is a topos which Aristotle has gotten from the world
because it is commonly admitted by everyone that there is more and less to things and their predicates in this
world, and this is admitted because it is a fact of this world. Such a topos of varying the more and the less
of the subject and the predicate and seeing if the predication still holds when it comes to the elements of
accidents and properties as we have seen, enables Aristotle to determine the reality of these accidents and
properties with respect to their subjects.

Let us next consider the use of the topic of the more and the less in definitions by looking at 146a3ff.
At 146a3ff, Aristotle tells us to see if the variation in degree (namely, an increase in degree) of the subject
that is being defined matches that of the terms of the description. If the subject being defined is the same as
the terms of the description, then either both must admit of the variation or neither. The next test consists in
seeing if both the subject and the terms of the description admit of a greater degree whilst the increase in
degree does not happen at the same time. This is because if they are the same, such an increase should
happen at the same time. (cf. 152b5-9) Another way of employing the greater and less degree in definition
is to see if the subject of the definition "applies in a greater degree" whilst "what is assigned by the definition
applies in a less degree" when one is considering alternative propositions for the definition (146a13-15). He gives the example of fire and how the definition of fire as 'a body consisting of the most subtle parts' is more suitable for light and less so for flame. If then, the definition given is the same as the subject defined, the definition and the subject ought to have the same increase in degree. In short, a greater degree ought to apply similarly to the subject and the terms proposed such that if the greater degree were to apply to the one and not the other, then the definition is not the same as the subject defined. Here again, one sees how the greater and the less as a *topos* helps Aristotle to determine if the definition given is the same as the subject defined.

The next *topos* which we might consider is that of contraries. In Book II for instance, Aristotle talks about dealing with someone who claims that "the knowledge of opposites is the same." (viz. 109b13-b29) In such a case, he says that we must examine the knowledge of: relative opposites, such as the double and the half; contraries and predicates that deal with privation and presence, such as blindness and sight; and contradictory predicates such as being and not-being. In examining these kinds of oppositions which fall under the aforementioned species instead of examining every single opposite, Aristotle thinks that we could determine the truth or falsity of the claim that knowledge of opposites is the same. This is because if we are to discover that the knowledge of any one of these opposites is not the same, then the claim is destroyed. On the other hand, if we find that this predication about the sameness of knowledge of opposites applies to all cases, then it is true. This discussion not only shows that the topic of contraries supplies us with materials for arguments, but it also shows that the topics of opposition, relative opposition, and contradictions are also useful in the investigations regarding claims to knowledge such as this one. Another *topos* that is also revealed in this discussion is that of investigating something within a class or species rather than through the infinite instances of such a thing. I will say more about this topic of generating materials for arguments through classifications (i.e., part-whole relations) shortly—for the talk of one class containing another and the predicates of the one belonging or not belonging to the other have their own permutations which generate materials for arguments.

Having seen one instance of how the topic of contraries contribute to the generation of materials for arguments about accidents, let us look at some other cases where contraries could generate materials for arguments. In Book II.7 112b26-113a14 Aristotle shows how it is that there are six ways of combining contraries and that four of these combinations give us a contrariety. He then shows that since there are two contraries to the same thing, we should pick whichever is more useful for the thesis. More specifically, the six combinations for contraries are:

1. Combining each of the contrary verbs with each of the contrary objects and doing this in two ways. E.g., doing good to friends and doing harm to enemies, or vice versa.
2. Combining the contrary verbs with one object and again, doing this in two ways. E.g., doing good to friends and doing harm to friends, or doing good to enemies and doing harm to enemies.
3. Finally, using one verb with the two contrary objects and again, doing this in two ways. E.g., doing good to friends and doing good to enemies, or doing harm to friends and doing harm to enemies.

He explains that the first two combinations do not produce contrarieties because doing good to friends is not the contrary of doing harm to enemies since both of these are choiceworthy actions and hence they are the same in character. The same applies to the converse since the converse results in both actions being actions to be avoided. The last four combinations however, do produce contrarieties. E.g., in the first way of combination (2), doing good to friends and doing harm to friends are contraries for the first act is to be pursued whilst the second is to be avoided. From these discussions, Aristotle shows that "the same thing has in fact more than one contrary. For 'to do good to friends' has as its contrary both 'to do good to enemies' and 'to do harm to friends.'" (113a15-17) Consequently, depending on the case, one of these contraries might be more useful than the other. That two contraries are available for something allows Aristotle to use contraries to generate materials for coming up with arguments which are for and against a case and hence generate *aporiai*. These *aporiai*, as I have already pointed out above, help one to ascertain the definition of something because each argument actually gets us a step closer to the essence or definition by getting us the true accident, or property, or genus, or definition.
Another way in which Aristotle uses the topic of contrary to examine if an accident is indeed the accident of a subject is by looking at the contrary of the accident if there is one. One must then see whether this contrary of the accident also belongs to the same subject to which the accident belongs. For if this contrary of the accident belongs, then the accident cannot belong for it is impossible for "two contraries to belong to the same thing at the same time." (113a23) Since such a way of employing the topic of contrary could test if an accident is truly an accident, it is indirectly important to the discovery of a thing's definition as I have shown in Section I.

Another way in which the contrary topic is useful in ascertaining the being of a thing is to look to see if whatever is said of the thing might lead this thing to have contrary predicates. For instance, if one were to say that "ideas exist in us," "it will follow that they are both in motion and at rest, and ... they are objects both of sensation and thought." So the presence of contrary predicates will determine if the assertion regarding the thing is false. (113a24-33) Finally, another way of using the contrary topic is to see if the accident and its contrary can belong to the same faculty (class or category are plausible too) if they are contraries which fall within the same faculty. For instance, if hatred is said to follow anger, then hatred would belong to the spirited faculty since anger is in this faculty. We are then to investigate if the contrary of hatred, namely, friendship, also belongs to this faculty for such contraries ought to fall under the same faculty. If friendship is not in the spirited faculty but rather falls in the appetitive faculty, then it is wrong to say that hatred follows anger. By the same token, Aristotle gives the example of claiming that the appetitive faculty is ignorant. Since what is ignorant can also have knowledge, it follows that the appetitive faculty is knowledgeable. But this is not true for "it is not a generally accepted opinion that the appetitive faculty is capable of knowledge," (viz. 113b4-7) hence it is not true to say that the appetitive faculty is ignorant.

The contrary topic is used in the investigation of a property in the following way. If one of a pair of contrary is not a property of one of another pair of contrary, then neither will the other of the first pair be a property of the other of the second pair of contrary. For contrary subjects consider justice and injustice. For contrary terms consider the greatest good and the greatest evil. If then, the greatest good is not a property of justice, then neither will the greatest evil be a property of injustice. By reversing the consideration from not being a property to being a property above will give us the constructive argument for a property. This same employment of the topic of contrary for destructive and constructive arguments is applicable to dealing with relative opposites such as double and half, and exceeding and exceeded too.

Use of the contrary topic in Book VI concerning definitions of terms is as follows. Aristotle says that the contrary description of the conjunction of terms ought to describe the contrary term. For instance, if 'beneficial' is said to be 'productive of good,' then 'harmful' is 'productive of evil' or 'destructive of good.' If neither of these contrary terms is the contrary of the original term, then neither are the descriptions later and earlier correct.(147a33-147b3) Another use of the contrary topic in definitions consists in those which derive their names from the privation of a contrary. These derivative terms are to be defined by their contraries. But Aristotle warns that "the other contrary cannot then be defined by means of the contrary whose name takes the form of a privation; for then the result would be that each was known through the other." (147b5-10) Another use of the contrary topic is when something which does not have a contrary (such as flesh and bone), is simply defined as something with a contrary (e.g., composition which contrary is decomposition)(151a24-28). In this case, it is clear that the definition offered is not correct or adequate and the use of the contrary topic helps establish this. A final way in which talk of contrary could help establish that a proposed definition is inadequate is this. When something which is open to both contraries gets defined only in terms of one of them, it is clear that the definition is inadequate.

Next, let us consider the use of the part-whole topic. Like the last use of the contrary where both contraries belong to something but only one gets mentioned, the part-whole topic works in definitions to identify the error of a definition which mentions parts but not the whole. As Aristotle puts it, "you must see whether, though the term which is being defined applies to a number of things, your opponent has failed to apply it to all of them," (142b30-33) e.g., only to mention writing from dictation to define grammar and not
mention reading is to include only a part and not the whole in the definition. Another way in which part-
whole works is this. When defining a complex term, Aristotle suggests that we take one part of the whole and see if the remaining description in the definition matches the remaining parts. If not, then neither does the whole definition describe the whole. (148b23-26) By the same token, another way contains the same number of parts as the parts of the whole being defined.

At 150aff, Aristotle discusses extensively the problems we could generate when dealing with definitions that are formulated in the form of conjunctions of parts. For instance, with respect to defining something as (1) A and B, Aristotle shows that such a definition will end up applying to both and to neither. This is due to the fact that each of these parts might have other parts that might contradict each other. Thus if one were to define justice as 'temperance and courage,' although one person may possess temperance whilst another possess courage so that taken together they possess justice, nonetheless, neither of them by himself is just. Furthermore the first person may possess temperance and cowardice whilst the second possess justice and incontinence. In this case, taken together, they will have justice and injustice since injustice is the opposite of temperance and courage, i.e., incontinence and cowardice. In general, Aristotle tells us that any argument that could prove that the parts are not the same as the whole is useful against such a definition.

In considering a definition that states that something is (2) "made up of A and B," Aristotle says that (i) we must consider the parts and see if it is unnatural for them to unite to form a single product. E.g., a number and a line can never join to form anything. Aristotle says, "for some things are so constituted in relation to one another that nothing can come into being from them." (150a25) (ii) The next consideration is to see if what is defined comes into being in a single thing whilst the parts do not come to be in a single thing but each in something different. (iii) If the parts and the whole, however, both exist in some single thing, then we should see if they exist in the same thing or not; for it is possible for the whole to exist in one thing and the parts in another. (iv) Next, we should see when the parts and whole perish; whether they do so at the same time or the parts perish when the whole does, or the whole perishes when the parts do, or the whole perishes but the parts do not. Aristotle thinks that the whole will perish when the parts do, but the parts need not perish when the whole does. (v) Apply the good and bad and see if the whole is good or bad whilst the parts aren't, or the converse. And he states that "it is impossible that anything either good or bad should come into being from something which is neither, or anything which is neither from things which are good or bad." (150b1-2) (vi) Another point is to see if one of the things has more good than the other has evil, and nonetheless, the product has not more good than evil. (vii) But it is also possible that (vi) is not so for things might not be good in themselves, but when combined, produce good, or the converse (e.g., drugs). (viii) The combination of the better and worse is considered in the same light as (vi) and (vii). (ix) Consider if the whole is synonymous with one of the parts, for this must not be the case. (x) See if the way in which these parts are combined have not been stated. For the way in which things are combined make them one thing rather than another.

Aristotle next considers the definition stated in the form of (3) "A plus B." If the 'plus' means "and" or "made up of," then any of the aforementioned arguments could be used. Next, consider if the 'plus' means that they are in the same place or time, or are contained in an identical receptacle, whilst such are inapplicable to A and B, then such cannot be the proper definition of the thing. If however, A and B can exist at the same time, check to see if they can be in different relations. If they could, then one does not have the correct definition (e.g., courage in robbery and right opinion about health matters). Even if they are used in the same relation (say health matters), if it's not the right one, but any chance relation, the definition is still incorrect. As he puts it, "For each must be related neither to some different object nor to some chance object which is identical, but to the true function of courage, for example, facing the dangers of war or anything which is a still more characteristic function of courage. (151a10-14)

Another extensive use of the part-whole topic is present in Aristotle's talk of the genus, species and differentia. Aristotle's view is that the genus is the most widely predicated or the most encompassing of these
elements. (144a30-32) Considering the genus as a whole then, being wider than the species, it is necessary that the species can admit the definition of the genus but not vice versa. (121a12-14) This topos allows us to check whether the genus that is proposed can be predicated of the species and whether the species can be predicated of the genus. For instance, if one were to propose X as the genus of 'being' or of 'oneness', what would happen is that the definition of the species (being or oneness) will end up being predicated of the genus since everything that exists is one and is being. In this way, the species would violate the fact that it is narrower in scope than the genus. Not only this, but to have being or oneness as a species means that there must be another species that is the species of non-being and non-unity. Since this is impossible, it is absurd to have something that is common to all things such as being and oneness be the species and have a genus of these.

Another use of the part-whole topic to show that the genus or the differentia cannot be one of these attributes that is common to everything is given at 127a25ff. Like the muddling of the species and the genus as before, the result of making a common attribute the genus of everything is another muddling of these two kinds of definitions which are supposed to be different in scope. If being were to be a genus, it would be the genus of everything since it is predicated of everything. But the genus is not to be predicated of everything but its species for Aristotle, otherwise there would not be any distinction into genus and species. Even oneness would be a species of being if being is the genus since oneness, too, is being. Accordingly, the species also ends up being predicated of everything and hence has the same scope as being or the genus. With respect to the differentia too, Aristotle maintains that if such a common attribute were to be a differentia, it would be predicated as widely as the genus, if not more widely. It would be predicated more widely than the genus if the genus is not also one of these common attributes and hence is predicated also of everything.15

The part-whole topos is used again to test the correctness of the assigned species by seeing if the genus is only partially predicated of the species. As Aristotle puts it, "for it is generally held that genus is not partially imparted; for a man is not merely partially an animal nor is the science of grammar partially knowledge, and so likewise in the other instances." (126a19-20) Likewise, if the genus is only captured in part, such a definition is mistaken. E.g., if animal were defined as being only an 'object of sensation' or 'object of sight.' Since such a definition does not include the part that is the soul, it is partial and hence incorrect. (126a20-24) Again, Aristotle points out that if one were to mistake the part for the whole, one would end up with the wrong genus. E.g., if one were to say that animal is 'animated body'. Since the part is not predicatable of the whole, one would be wrong to think of the genus as this part. (126a25-29)

From these part-whole considerations, one is able to test the proposed species, differentia, and genus. Since these are all essential elements to a definition, they again aid in our knowledge of definitions for Aristotle. Most importantly, the topos of part-whole which allows us to make such arguments to establish the true status of these elements does not lie within Aristotle's definitions of these elements. Hence, using the arguments generated from this topos to test these elements is not circular. Furthermore, the understanding and agreement of the part-whole topic is a common opinion because it is a part of reality and hence it constitutes the way in which we think about reality. Nonetheless, such an opinion, is more primitive than many other more developed opinions which express one's established views about certain matters, say, about the first principles or causes. These opinions which express more developed views by everyone or the many and the wise have been discussed by most commentators. The more primitive opinions which are our opinions about things or aspects of reality that are simple are my focus. Due to the primitive nature of these topoi such as part-whole, greater and less, contraries etc., and the fact that Aristotle thinks that we are never mistaken when it comes to such simple things (viz. Metaphysics 1051b23-33), employing these elements as materials to generate arguments allow us to get at the truth or the facts without begging the question.

15 For the wider scope of differentia when compared to the species see 144b5-7. Hence the differentia is to be predicated of the species but the species is not predicated of the differentia. For the impossibility of predicating the genus of the differentia, see 144a32-144b3.
Furthermore, the number of arguments that one could come up with from the permutations within each of these *topoi* as well as from the permutations available by combining the various *topois*, enable Aristotle to come up with tests for each of the elements and their contributions to definitions in ways that are far from being restricted to one's established common opinions. And this is precisely the reason why Aristotle stresses the usefulness of an abundance of materials for arguments. Such an abundance of materials for arguments and hence the abundance of arguments for and against a certain view lets us examine an opinion far beyond just trying to preserve such an opinion.

Let us next consider the *topos* of "better than" or superiority. This *topos* is concerned to compare things that are closely related (*sunengus*) such as: the more permanent and the less; that which is desired for its own sake (or ends) and that which is desired for something else (or means); the *per se* cause of good and the accidental cause of good; the absolute and the individual good; the better consequence of two or more things; the preferable with respect to time; self-sufficiency and dependency; and many others. Aristotle believes that oftentimes we cannot see which of these things being compared is superior. But once it is made clear or shown (*deikteisès*) which is superior, we will choose that which is superior.\(^\text{16}\)

Using the *topos* of the greater and the less for instance, Aristotle argues that more good things are better than less. Such a superiority could be either absolute or when one is included in the other, for instance, when the less is included in the greater. Nonetheless, he combines *topoi* and makes a case for how something that is desired for its own sake cannot even be superseded by taking together a greater number of things which are desired for the sake of this thing that is desired for its own sake. For instance, to become healthy plus health is not better than health itself since health is the end at which one aims when one chooses to become healthy. Again, using the greater and the less combined with consideration of consequences, Aristotle claims that there is nothing to prevent something that is not good from being more choiceworthy than that which is good. This happens when the thing that is not good is added to something that is better than the other good thing plus another good thing. E.g., when something not good is added to happiness, it is better than justice plus courage.\(^\text{17}\) Finally, Aristotle speaks of how the same thing is more choiceworthy when it is accompanied by pleasure and freedom from pain. (viz. 117a15-25)

Using time as another *topos*, Aristotle is able to argue for the superiority of one of these two or more closely related things. He claims that which is more useful on every occasion is better than that which is sometimes useful. (117a35-37) Likewise, that which persists through time or is more permanent is superior to that which is fleeting. (116a13) Using time again, he argues for the choiceworthiness of certain things when it is most important to that time. E.g., to be free from pain when one is old is to be preferred to this freedom from pain when one is young for one is more prone to be troubled by pain in old age. Likewise, self-control is preferable when one is young rather than when one is old because the young is more troubled by passions and hence is more in need of self-control.\(^\text{18}\) (117a25-34)

\(^{\text{16}}\)Such a claim which Aristotle makes at the beginning of *Topics* III shows very clearly the error of those who think that the *Topics* is simply pure form without content, or that it is incapable of supplying us with truth. Thus Evans' claim that "dialectic is essentially neutral with regard to the truth in any matter and is concerned rather to test the merits of both sides of a case without finally pronouncing on which side has the greater merit" (34) directly contradicts Aristotle's statement here.

\(^{\text{17}}\)For more use of the topic of consequences in general, see 116b5-15.

\(^{\text{18}}\)For the use of time as a topic in Book VI see 145b21ff, and 150b35ff, in Book V see 134a5ff.
Conclusion

Most commentators think that arguing dialectically for Aristotle means arguing from common opinions that are somehow already established views about the way something is, or about actions to be taken or avoided so that there is a problem of how one is to discover objective truths that may lie beyond what is given in these opinions. My reading of dialectic—especially philosophical dialectic—in Aristotle does the following. I read dialectic as being concerned to come up with the materials for arguments. These materials are not always already opinions that support one’s developed presuppositions as I have described above. Rather, some of these materials are prior to such opinions which form the well established views about certain matters which some take common opinions to be. I think that even prior to these views, which also constitute the arguments are opinions about certain topics which topics are derived from aspects of reality and reality itself. These topoi then aid in the determination of the correct four elements which in turn are all directed at definition. Apart from the four elements, these topoi also help establish materials for arguments in such a way that the truth or falsity of a certain argument is laid bare. My extended discussion of the examples of the way in which each topic applies to each of, or some of, the four elements hopefully have shown how it is that the arguments that are derived from these topics do not just generate arguments without any clues as to the truth or falsity of these arguments. Rather, the arguments that are generated from these topics actually allow us to determine within each argument, what the reality of each of the four elements is. Hence within the materials for arguments themselves are already tests which allow us to test the way reality is because reality itself structures these topics, making them the means to determining if reality is one way or another. By using these topoi in his dialectical procedure to generate materials for arguments, which arguments in addition are aporetic in nature, in the sense that Aristotle is always concerned to argue for and against a certain matter, one is also given the means with which to determine if the four elements are true of reality for these topoi limit the possibilities of the assertions and make certain definitions true and others not true. These topoi limit the possibilities of definitions because they are from reality or being which itself is limited and structured so that when one tries to capture reality or being in a definition by using these topics, what one gets is a definite definition.

So instead of the oft-claimed view that Aristotle's *Topics* only provides us with form and no content, I think that the topics do present us with content in the sense that it is bound up with a certain ontology or view of the world. The world is so structured that these topics exist as reality or as aspects of reality. For instance, that there is the greater and less, contraries, the one and the many, the better and the worse, the prior and the posterior, part and whole, things that are absolute (*kath’ auto*) and non-absolute or accidental, means and ends, things permanent and fleeting, independent and dependent, and things that are necessary, by chance, or usually the case. Far from limiting our investigations to certain common opinions then, these primitive common opinions, i.e., the topics, and their permutations actually open up all the possibilities which are to be investigated. In addition to opinions that are common and generally agreed upon then, arguing dialectically for Aristotle in my view is always already philosophical because it is concerned with the same kinds of subject matter as philosophy for it is always using materials that get at the way the world is (i.e., the materials supplied by the topics) and hence is a method that is always already bound up with the way the world really is. If then the world is structured hierarchically so that there is a primary substance which forms the focus of all other substances, dialectic working through the tools of the topics will reveal this fact. It is important to note that many of these opinions, if they are not common, are at least about certain things, or aspects of things and actions that are common to everyone. That is, they are not about things that are totally alien, nor need they be about things that everyone agrees beyond the agreement that there is something there to be determined. It is the very fact that not everyone agrees about the state of the matter beyond agreeing that there is something there that Aristotle needs to come up with the materials for arguments for and against

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19Barnes, Bolton and Evans all perceive this as a problem in Aristotle’s dialectic.
what the thing is. So the point in the opening paragraph of Book III applies analogically to the rest of the *Topics* by being applied to the opinions that we may have about something so that the arguments we come up with are for determining which of these closely related opinions, in the sense that they are either about the same thing or some aspect of the thing, is the true one.